This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

HARVARD UNIVERSITY

LIBRARY OF THE

GRADUATE SCHOOL
OF EDUCATION

The Measurement

OF

Teaching Efficiency

BY

FELIX ARNOLD, PH. D.

Author of "Special Methods of Instruction," "Outline History of Education," etc.

LLOYD ADAMS NOBLE, PUBLISHER

31 WEST 15TH STREET NEW YORK

LB1715
.A75

HARVARD UNIVERSITY
GRADUATE SCHOOL OF EDUCATION
MONROE C. GUTMAN LIBRARY

MAY 28 1918

COPYRIGHT, 1916
BY FELIX ARNOLD

PREFACE

Efficiency in any work deals with details and particulars which are so numerous that standards and measures must be explicit and definite. To state that efficiency is the process by which to secure the maximum of result with the minimum of work and material is to stir up further inquiries as to what a good result is and how it may be attained. General directions and principles are here of little use for quiet effective action, and for products economically brought forth. On this account, any practical scheme for measuring the efficiency of teaching must be extremely detailed and specific.

In making five divisions for most of the merits there is no assumption on my part that any magic potency inheres in this number. It is simply convenient for purposes of classification, and sufficient for the detail necessary in distributing the constituent excellencies of any unit. Whatever unit or standard is taken can readily be divided into as many parts as one desires, whether the number be three, four, five six, etc. The

divisions and the enumerations outlined in the book have been found effective in measuring practical, classroom work and will be found inclusive enough to deal specifically with any situation which may arise. The categories employed have been kept as close as possible to the material, work, and results common in the school.

Due to the possibility offered in the New York Public School System for experimentation and investigation, and to the *Lehrfreiheit* to be found there, I have been able to develop the various standards presented, and to test them with teachers of various grades of efficiency or deficiency. I have had opportunity to make a close pedagogical study of almost two hundred teachers for this purpose. Two pamphlets which have been helpful are *Tests of Efficiency in Teaching,* by Superintendent E. B. Shallow, and *Document No. 5,* 1914, *On Examining, Training and Selecting Teachers,* by Director A. Shiels of the Division of Research, Department of Education, New York.

FELIX ARNOLD

CONTENTS

PART PAGE

I. INTRODUCTION.

1. On measurement in general 3
2. On methods of teaching in general..... 12
3. On application and technique in general.. 22
Tables 33

II. THE TEACHING PROCESS — INSTRUCTION AND DISCIPLINE.

1. Preparation 39
Topical outline and values 43
Common errors 44
2. Incentives 46
Topical outline and values..... 53
Common errors 54
3. Visual appeal 56
Topical outline and values 61
Common errors 62
4. Oral appeal 64
Topical outline and values..... 74
Common errors 75
5. Manual appeal 80
Topical outline and values 86
Common errors 87
6. Application and technique 91

III. PERSONALITY—CO-OPERATION.

1. Personality in general 97
2. Towards pupils 99
Topical outline and values 104
Common deficiencies 106
3. Towards visitors 110
Topical outline and values 116
Common deficiencies 117
4. Towards the school 120
Topical outline and values 125
Common deficiencies 126
5. School activities 129
Topical outline and values 132
6. Records and reports 133
Topical outline and values 134
7. The negative instance 136

CONTENTS.

PART PAGE

IV. RESULTS OF INSTRUCTION—EXPRESSION.

1. Oral expression 141
   Topical outline and values 142
   Common weaknesses 142
2. Appreciation—Study of the text-book..... 145
   Topical outline and values 148
   Common weaknesses 148
3. Manual expression 149
   Topical outline and values 152
   Common weaknesses 152
4. Motor Expression 155
   Topical outline and values 156
   Common weaknesses 156
5. Written expression 158
   Topical outline and values—Form..... 159
   Common weaknesses 159
   Topical outline and values—Content..... 161
   Common weaknesses 161

RESULTS OF INSTRUCTION—ARITHMETIC.

1. Addition 165
2. Subtraction 171
3. Multiplication 175
4. Division 179
5. Fractions 182
6. Decimals 186
7. Compound numbers 188
8. Percentage 191
9. Indirect cases 193
10. Metric System 195
11. Mensuration 196
12. General suggestions 198
    Common weaknesses 199

RESULTS OF INSTRUCTION—CONTENT OF OTHER SUBJECTS.

1. Kinds of knowledge 202
2. History and Civics 210
3. Geography 214
4. The Study of Nature 215
5. Language 217
6. Manual work 223
7. General Suggestions 224

CONTENTS

PART		PAGE
V.	RESULTS OF DISCIPLINE.	
	1. Personnel	229
	2. Material	231
	3. Routine	234
	4. Response	238
	5. Class Activities	244
	6. Social Morality	250
VI.	APPENDICES.	
	A. Three Rules of Inspection	259
	B. A Case in Point	265
	C. Elliott Scheme of Measurement	272
	D. Ohio State School Survey	276

I
INTRODUCTION

I

ON MEASUREMENT IN GENERAL

It is a popular superstition that human action, personality, and behavior, will be penned up and hindered when measured by logical categories and fixed units. But, just as the pound weight has not interfered with the production of butter, and the yardstick has not obstructed improvement in the manufacture of cotton or other goods, so methods in teaching, it may be assumed, will be free to go their own way, even when fixed standards are applied. The spirit can still go whither it listeth. Measurement must meekly follow, gather up the results, and give them a value. Analysis, in fact, will show that the method in great degree determines the standard, and may even become the standard which will be applied on future occasions. In the spiritual as in the material world, nature can be conquered only by submission.

Weights and measures call to mind such units as pound, quart, or yard, and imply definite amounts and quantities. A pound of steak is a pound of steak, a quart of milk is a quart of milk, a yard of wool is a yard of wool, here or elsewhere, now and to come —with, however, a qualification. The steak weighs a pound, but only for some purpose, as, exchange, food value, comparison, or other intent. The pound of steak, as such, must therefore be further qualified. It must have not more than a certain amount of connective tissue, or bone, or fat. It must be of a required age, and may be otherwise circumscribed. So, too, with milk. Milk is not only measured by the quart, but it must also be of grade *A* or grade *B*, must be of limited age, and without chalk or other added ingredients. With woollen cloth, the goods must be all wool and of a yard or other determined width. Expert knowledge of the highest type is often demanded in appraising and evaluating qualitative characteris-

tics of substances which, to the man behind the counter, are measured only by the yard, or pound, or other measure.

Serial valuation is implicit in practically all measurement, whether this be by volume, weight, length, or amount. To return to other homely instances, five pounds of chicken are not only five pounds of chicken, but in addition the fowl must fit somewhere in the series: soup—fricassee—roast—capon. Tea likewise must fit in a scale of values determined only by a highly paid tester. So the story runs. Determination of such series and ability to give a substance its place in it require in most cases a specialized training and ability. Though, for the shop keeper and for the consumer, this qualitative valuation has been done, it can not be ignored. The pound, yard, or quart tell but a part of the story.

Any judgment which we make, as good or bad, or more or less, implies a series of values and placement within the series. Gen-

eral knowledge is crude and often contains for its standard the two or three values, as, *bad—good—excellent.* More specific knowledge not only extends the series, but also adds qualifying characteristics to its members, and closely analyses each one. The expert is so trained that he can define accurately the different units in a series, and give each of them a value.

Crude judgments, as, *good—fair—poor,* etc., are passed upon work in the school and the classroom. The judgment, *poor—good—excellent,* or, *satisfactory—unsatisfactory,* may in some cases be correct, and in most cases be honest. Honesty, however, does not preclude the possibility of ignorance or lack of training, nor does it always include a free and unbiased mind. The varying moods in which the supervising official finds himself, the different influences at play on various occasions, and the overwhelming subjective and dictatorial attitude which may sway judgments of classroom work, render this

crude valuation and appraising of little worth. Especially is this the case when standards (if any at all are present) are not known to the teacher who is being judged.

The teacher does not object to criticism. The teacher does not frown upon definite, objective standards. The teacher does not fear measurement according to such known standards. But what she does dread is the mysterious inspection, which flows no one knows from what source, which leads anywhere but to sweetness and light, and which leaves her shaken, often to the extent of hysteria. A pillar of flame by night would inspire her with less alarm.

Measurement of school work by results has fallen on evil days because due regard has not always been given to the apparently unmeasurable processes and methods used in attaining these results. Properly relegated to its place in a more complete scheme of valuation, in which the process is also judged, measurement by results is helpful

and can not be ignored. The result and the process both are fit subjects for measurement.

The chief difficulty in any scheme of valuation lies in measuring, by known, objective standards, the different phases of the teaching process. Properly to evaluate the teacher's presentation of her work, it is necessary to analyse carefully her preparation, the appeals which she uses, and the incentives which she calls into play. Each aspect, moreover, can be given a value, according as it fills a position in a series of excellencies. For example, preparation will yield a series somewhat as follows:

(1) No preparation
(2) Plan book and nothing else
(3) Plan book + material at hand
(4) Plan book + material + proper sequence and organization
(5) Plan book + material + sequence and organization + promptness

Judgment of the teacher's preparation of her work can not now be an offhand, "Very poor," "Good," or "Excellent." It must be a simple statement of facts, or rather a checking up under known categories and in a definite series, with placement in one of the five positions. If each position is given a value, a rating can be given according to the following scheme:

Position—	1	2	3	4	5
Rating—	0	25	50	75	100

Arranged more conveniently for purposes of supervision, the following order results:

Preparation of work	100
Plan	*25*
Material	*25*
Sequence and organization	*25*
Promptness	*25*

Each of these four merits may be further analyzed and each detail allowed a value.

Measurement of school work on its qualitative side is made possible by arranging a

series of excellencies, (standardization), and by checking up the work and giving it a place and a value according to its position in the series. Measurement of school work on its quantitative side is the valuation commonly known as 'measurement by results,' that is, it is the correction of work on a percentage basis. It is all very simple, and affords nothing new as far as the aspects themselves are concerned. It is merely the serial arrangement, organization, and valuation, which may seem new.

Presentation of the lesson, results of instruction, results of discipline, personality of the teacher, all these can be treated objectively in the manner suggested. The value of such serial treatment is almost self-evident. It ties down the one who inspects to a definite procedure, and shuts out as far as possible any subjective, irresponsible judgment. A series of excellencies known to the teacher guides her in right practice. A series of objective standards allows of cooperation,

mutual understanding, and appeal to others, where undue severity of judgment is exercised on the basis of the facts checked up. No one can well appeal a flat fiat of an official superior. But justice may become more of a reality when not only the judgment is given, but also the data on which it is based.

II

ON METHODS OF TEACHING IN GENERAL

In the teaching process, two individuals, the teacher and the pupil, are engaged upon a third object, the material in instruction and discipline. We have a triangle, as it were, but a triangle of which the three sides are not equal. The child is still in leading strings, and the material is subject to selection, simplification, and arrangement. Further considerations will involve the number of pupils to be taught in a single class, and the number of grades to be organized in a single school.

On the one hand, the child conditions the method which is to be used in presenting the material to him. He will be able to progress, only as he is able to see, hear, talk, manipulate, remember, think, feel, and in general, react and express himself to the fullest ex-

tent of his powers. Moreover, he will be found to react better under some conditions than he will under others. He is more responsive when his feelings have been touched, his desires aroused, his ambition stirred, or his experience called into play. Physical and hygienic conditions may further support instruction in this connection. On the other hand, the material and the subject matter form an integral part of the method of presentation. Organization, arrangement, gradation, etc., are a prerequisite to success.

On the side of presentation in instruction and discipline, we have therefore the following aspects of the teaching process:

Preparation of work
Use of incentives
Visual appeal
Oral appeal
Manual appeal

It is to be noted that these categories are objective and refer to what the teacher does.

Other categories which are in use often confuse mental processes within the mind of the pupil, with device and method employed by the teacher. Induction and deduction, for example, refer in part to thought processes of the children, and as such are rather principles which underlie and condition method, than method itself. Other expressions, as, the recitation lesson, the study period, appreciation, problem work, etc., are either included in the above headings, as, oral appeal, or are to be considered a result of instruction, under one or more of the headings given below, as, expression.

Motor expression, dramatization, and the like may be considered a result of instruction, rather than a part of the presentation, as such. If a motor presentation is given for the benefit of the class, it becomes a visual appeal, and subject to consideration under that heading. In fact, visual and oral appeals are necessary before much motor expression can take place.

Whether a subject is developed, reviewed, or drilled, it makes its impress through much the same avenues, visual, oral, or manual. In drill, the essence is repetition, and in review it is organization. Drill emphasizes focalization upon a few topics, appeal to all the members of the class, and stimulation of the pupils as many times as possible through as many appeals as possible. Review emphasizes logical system and order in the arrangement of material, and employs condensation, topical outline, and logical or other sequence.

After the teacher has presented the subject properly to the pupils, one naturally looks for definite results. It has long been the custom to hold oral and written expression synonymous with much of the language work. And there were always added conditioning directions to the effect that English should also be considered in recitations in other subjects, as, arithmetic, geography, etc. It seems better, however, to make 'expression' the larger term and 'language'

only one of its different forms. For instance, we may have valuable expression in the different manual exercises, dramatizations, and the like. Expression, as such, can be considered one of the chief results of instruction, without restriction by any such limitations as inhere in language. Of the different forms of expression, we have:

Oral expression
Appreciation and study of text-book
Manual expression
Motor expression
Written expression
    Form
    Content

Further results in instruction call for the content of the different subjects of the grade. These are the usual school subjects, namely:

Arithmetic
History and civics
Geography
Study of nature
Language and music
Manual work, penmanship, etc.

Divisions and subdivisions can be given according to the extent to which details are required. It is to be noted that manual work, and the like, have a content value apart from their merits as expression.

Results in discipline, so called, are similarly to be expected as a consequence of effective development, training, and practice. These results include:

Personnel of the children
Material in the classroom
Routine
Response
Class activities

If social morality is a school subject and is treated specifically like other school subjects, as, arithmetic or geography, topics can be arranged and organized for purposes of checking up.

In so far as the teacher is before the pupils during school sessions and should set an example of correct behavior in many details,

her personality, considered in its relation to the pupils, becomes of considerable moment. Further relationships branch out and include reaction towards the parents of the children, towards colleagues within the school, superior officials, etc. Such relations materially react on classroom instruction and discipline. The close interest now manifested in the welfare, progress, and numbers of the children under the ever expanding wing of the school, necessitates an accurate keeping of many records. Here, too, the personality of the teacher makes for efficiency or inefficiency, as the case may be. Enumerating the different directions in which the teacher's personality should be an influence, we have the following:

Towards the pupils
Towards visitors
Towards the school
School activities
Records and reports

Such aspects as self-improvement, studies, etc., may be counted in under the head of personality towards the school.

A category which is now more popular than 'personality' in present-day use, is 'co-operation.' Cooperation is the same thing as personality in its dynamic aspects, and places greater emphasis upon the different relationships, as, Cooperation with pupils, Cooperation with visitors, Cooperation with colleagues, and so on. But in essence, personality dynamically considered, and co-operation are much the same.

The very fewest number of excellencies which should be rated in testing the efficiency of the teacher, are four, namely:

Presentation in instruction and discipline
Results of instruction
Results of discipline
Personality and cooperation

A more complete scheme will include the following:

TEACHING EFFICIENCY

Presentation
- *Preparation*
- *Use of incentives*
- *Visual appeal*
- *Oral appeal*
- *Manual appeal*

Personality (cooperation)
- *Towards the pupils*
- *Towards visitors*
- *Towards the school*
- *School activities*
- *Records and reports*

Results of discipline
- *Personnel of the pupils*
- *Material*
- *Routine*
- *Response*
- *Class activities*

Results of instruction
- *Expression*
  - *Oral*
  - *Appreciation and study*
  - *Manual*
  - *Motor*
  - *Written*

Content of subjects
Arithmetic
History and civics
Geography and nature
Language and music
Manual work, penmanship, etc.
(Social morality)

Still further details can be worked out as the following pages will show.

III

ON APPLICATION AND TECHNIQUE IN GENERAL

To ensure cooperation between principal and teacher, and to facilitate progress and improvement in the efficiency of teaching, it is necessary for the principal to employ a standard which applies to all, and for the teacher to know exactly what that standard is. Whatever blanks, etc., are used in rating and checking up classroom work should therefore be placed in the hands of all the teachers concerned. It is advisable, moreover, for the teacher to check up her own work from time to time, and to make arrangements by which two teachers can visit and give each other ratings according to the blanks in use.

For the principal, printed blanks may be considered one of the essentials in school control. The head of the school usually be-

gins with considerable enthusiasm to give model lessons, to write directions for the benefit of new teachers, to outline plans, and to correct error. These, however, soon assume a monotonous uniformity. The same suggestions are needed again and again. New teachers flounder about in much the same helpless fashion. Weakness and error follow about the same general lines. Often the principal will give up the never-ceasing, Sisyphus-like occupation of improving the work of teachers. He may allow matters 'to settle themselves,' may lean back, and find everything 'very fine.' Sometimes he will promulgate a long list of rules, from number one, on, with subdivisions and details, which are handed, *en bloc,* to the teacher. Again, he may fear to bind himself in writing, and deliver oral suggestions, which soon become distorted in the reminiscent consciousness of the teacher. What is needed, is not a descriptive catalogue of merits and demerits, given *in extenso,* but rather

a system of properly organized categories which are based on sound principles and which have been tested in practice. Printed blanks carry with them their own corrections, the headings automatically pointing out to the teacher which excellencies she has violated, or which merits she has attained in her work. If the loose leaf form of blank is used, a carbon copy can be made, and this should be given to the teacher. Unless this is done, the inspection is of little use in improving the teacher's efficiency.

When an inspection is made by the principal, he quietly enters the room, and with the teacher's permission, begins to check up, evaluate, and record merits and demerits. The blank which deals with the excellencies of the teaching process requires from 5 to 15 minutes to check and fill out, depending upon the number of details recorded. In this blank, all the merits may not apply, and so need not be touched upon. For example, a lesson may call for only oral work. In this

case only the headings under *Oral Appeal* will be used, with perhaps some of the headings under *Preparation,* or *Incentives.* In the beginning, numerical values need not be given. Such marks as cross, (x), question mark, (?), dash, (—), or check, (✓), may be employed according as there is a deficiency needing correction, a merit which is in doubt, an excellence which is not required by the lesson, and so does not figure in the report, or a value which is present and fully credited. Later, numerical ratings can be given. The same general method of procedure holds with the blank which considers the *Results of Discipline.* No more than 5 or 10 minutes are needed to check up a class. Entries under some of the details of *Routine, Response,* and *Class Activities* do not require checking up in the room at all, and can be calculated in the office. The blank on *Personality* can be filled out in the office, and so can some of the items on the blanks which deal with *Results of Instruction.*

In the use of the blanks, two questions which arise, are: How often should inspections be made? and, How many blanks of each kind should the teacher receive? On the assumption that there exists a fairly uniform grade of efficiency throughout the school, there will be needed for each teacher one blank a term on *Personality,* from one to three blanks on *The Teaching Process,* from one to three on *Results in Discipline,* one to three on *Results in Expression,* and one for each test given for *Results in Content.* Tests in content may be given to the whole school once each month or two, according to the time spent on the subject, as, arithmetic once a month, geography or history every other month, etc. The class teacher should check herself up mentally, and reflect upon her work, substituting *month* for *term,* and *week* for *month,* in the time values given in the preceding suggestions.

Variation from this general method is necessary when deficiencies exist and are

found. A weakness which has been recorded should be followed up. In such a case two or three blanks on the same topic, and indicating the same weakness or deficiency should be sufficient to secure correction before a final inspection is made and the term rating given. For example, the same subject may be inspected for from three to five days in succession; two or three notes on personality may be required; results in discipline may require from three to a dozen or more visits before the term is half way over; or some special item, as, *Incentives, Voice and Manner, Oral Appeal,* etc., may need correction several times. Such corrections are emphasized when they are repeated in exactly the same words, and with exactly the same ratings, where no improvement is evident. Two or three such suggestions are enough to effect a cure, without any comment or oral expostulation of the least kind by the principal.

What is to be done if that *rara avis,* the teacher who combines inefficiency with contumacy and aggressiveness, is found in the school? The blank on *Personality* is inclusive enough to record deficiencies under the headings of *Helpfulness, Patience, Courtesy, Ability to listen,* etc. Further demerits will probably crop up in the written work, in the preparation of work, and in the use of incentives. These should be recorded. The same method of inspection which is used in the case of the other teachers, should apply to the particular teacher under observation. At least several ratings should be given, with positive suggestions as to means of correction. There will be no argument nor 'fuss' of any kind with a teacher, if the principal simply listens, without answering. In such a case, it is a question of evidence, and not a matter of personal argument. The teacher who takes a kind of pride in 'asserting herself,' in giving an argument, in letting people know, etc., will then find herself,

as far as any results are concerned, beating in the void her fluttering wings in vain. Once an individual receives definite instructions in writing, ignorance can not be an excuse, violation implies lack of good will, and all responsibility rests with the one who intentionally fails to carry out suggestions. The duty of the principal ends when he has delivered his directions, given aid, and checked up the results.

In calculating results, the basis taken will depend upon the nature of the work inspected. If only four or five pupils are examined, (five best, five middle, or five worst), a fifth will be deducted for each one who misses. If the whole number of pupils present forms the basis, as in inspection of the *Personnel* of the children, an exact rating can be rapidly worked out by means of the tables on pages 33-35. For example, 20 counts out of 100 are allowed for condition of shoes. If there are 31 pupils present, and 8 have unshined shoes, each one will count 0.6452, ac-

cording to Table 10-34, page 33. The 8 will count 5.16 out of the total of 20, which will leave 14.84 as the rating of the class on condition of shoes. A similar use of the tables can be made in correction of sets of composition, and the like, where the register or the attendance is taken as the basis in calculation. For example, if 9 out of 34 papers are marred by blots or blurs, by reference to the value of 1 out of 34 as given in the table, (page 33), 9×0.5882, will have to be deducted from the total of 20 counts allowed for the merit in question, which gives $20 - 5.29 = 14.71$.

Occasionally it is necessary to arrange the classes in a series, and form four, five, or ten groups. If a total of 20 is allowed for an excellence, 5, 4, or 2 becomes the unit of increase from the lowest group to the highest. For example, if there are 35 classes in the school, these can be grouped in 4 divisions of merit, the highest being given 20, the second highest, 15, the third, 10, and the last, 5. In

the first division there will be 9 classes, in the second, 9, in the third, 9, and in the last, 8. Such a method of valuation applies to room decoration, to absence of pupils, etc. The series in attendance of pupils can be arranged according to the per cent of attendance obtained for a given period, week, month, or term.

In checking up work on a percentage basis, as, in arithmetic, or spelling, the average, median, or mode may be used. The average is the common measure employed by teachers. The totals of each paper are added up and divided by the number of cases. Thus 9, 9, 8, 8, 8, 7, 7, 6, 5, 4, 4, 3, added up give a total of 78, divided by the number in the series, 12, give an average of 6.5. If we count down to the middle case, the sixth, the median value, 7, will result. The median is not affected by extremes, that is, by 100's or 0's, but it is not a good measure unless there is considerable variation in the results. When the results show a massing about a

few values, the mode is a good measure. Thus in the series, 10, 10, 9, 8, 8, 8, 8, 8, 7, 7, 7, 7, 7, 6, 5, 5, the mode, 7—8, would be a good valuation to take. Where a single merit is to be tested, as, general appearance of papers in drawing or construction work, the papers may be arranged in a series, and the middle one selected as representative of the whole set. For more accurate testing, however, it is better to mark the papers on a numerical basis, giving values to the different merits which inhere in the work.

TABLE: 10—34

VALUE OF 1 OUT OF 10—34, WHEN THE TOTAL IS 100, 25 OR 20

No.	*100*	*25*	*20*
10	**10.0000**	**2.5000**	**2.0000**
11	9.0909	2.2727	1.8182
12	8.3333	2.0833	1.6667
13	7.6923	1.9231	1.5385
14	7.1429	1.7857	1.4286
15	**6.6667**	**1.6667**	**1.3333**
16	6.2500	1.5625	1.2500
17	5.8823	1.4706	1.1765
18	5.5556	1.3889	1.1111
19	5.2632	1.3158	1.0526
20	**5.0000**	**1.2500**	**1.0000**
21	4.7619	1.1905	0.9524
22	4.5454	1.1364	0.9091
23	4.3478	1.0869	0.8696
24	4.1667	1.0417	0.8333
25	**4.0000**	**1.0000**	**0.8000**
26	3.8461	0.9615	0.7692
27	3.7037	0.9259	0.7407
28	3.5714	0.8928	0.7143
29	3.4483	0.8621	0.6897
30	**3.3333**	**0.8333**	**0.6667**
31	3.2258	0.8064	0.6452
32	3.1250	0.7812	0.6250
33	3.0303	0.7576	0.6061
34	2.9412	0.7353	0.5882

TABLE: 35—59

VALUE OF 1 OUT OF 35 — 59, WHEN THE TOTAL IS 100, 25 OR 20

No.	*100*	*25*	*20*
35	**2.8571**	**0.7143**	**0.5714**
36	2.7778	0.6944	0.5555
37	2.7027	0.6757	0.5405
38	2.6316	0.6579	0.5263
39	2.5641	0.6410	0.5128
40	**2.5000**	**0.6125**	**0.5000**
41	2.4390	0.6097	0.4878
42	2.3809	0.5952	0.4762
43	2.3256	0.5814	0.4651
44	2.2727	0.5682	0.4545
45	**2.2222**	**0.5555**	**0.4444**
46	2.1739	0.5435	0.4348
47	2.1277	0.5319	0.4255
48	2.0833	0.5208	0.4167
49	2.0408	0.5102	0.4082
50	**2.0000**	**0.5000**	**0.4000**
51	1.9608	0.4902	0.3922
52	1.9231	0.4808	0.3846
53	1.8868	0.4717	0.3774
54	1.8518	0.4629	0.3704
55	**1.8182**	**0.4545**	**0.3636**
56	1.7857	0.4464	0.3571
57	1.7544	0.4386	0.3509
58	1.7241	0.4310	0.3448
59	1.6949	0.4237	0.3390

TABLE: 60—84

VALUE OF 1 OUT OF 60—84, WHEN THE TOTAL IS 100, 25 OR 20

No.	*100*	*25*	*20*
60	**1.6667**	**0.4167**	**0.3333**
61	1.6393	0.4098	0.3279
62	1.6129	0.4032	0.3226
63	1.5873	0.3968	0.3175
64	1.5625	0.3906	0.3125
65	**1.5385**	**0.3846**	**0.3077**
66	1.5151	0.3788	0.3030
67	1.4925	0.3731	0.2985
68	1.4706	0.3676	0.2941
69	1.4493	0.3623	0.2898
70	**1.4286**	**0.3571**	**0.2857**
71	1.4084	0.3521	0.2817
72	1.3889	0.3472	0.2778
73	1.3699	0.3425	0.2740
74	1.3513	0.3378	0.2703
75	**1.3333**	**0.3333**	**0.2667**
76	1.3158	0.3289	0.2631
77	1.2987	0.3247	0.2597
78	1.2820	0.3205	0.2564
79	1.2658	0.3164	0.2532
80	**1.2500**	**0.3125**	**0.2500**
81	1.2346	0.3086	0.2469
82	1.2195	0.3049	0.2439
83	1.2048	0.3012	0.2410
84	1.1905	0.2976	0.2381

II

THE TEACHING PROCESS
INSTRUCTION—DISCIPLINE

IV

THE TEACHING PROCESS

§1. *Preparation*

The plan of work used by the teacher may consist of written notes in a book, of clippings, or of cards. The work for the day should in some manner be indicated. When a daily plan book is used, an outline of the lessons is indicated, with the time to be apportioned, and the method, (development, drill, review, or test), to be followed. When cards are used they are shuffled and arranged under the subject headings to be taken up during the day. Whether the daily plan or the card system is employed, each is dependent for its relation to the classroom routine upon a schedule or program of work usually found at the back of the teacher's desk. Such a program contains an arrangement of subjects by days and lesson periods.

A complete plan will have the following series of excellencies: *(1) an outline of the work stated in general terms; (2) specific types and topics indicated under each subject to be taught during the day, as, type examples, sentences, etc., facts or outlines in geography, plans in drawing, material for story telling, etc.; (3) the time of the day at which each lesson is to start, and the method which is to be followed, whether development, drill, review, or test; (4) the whole neatly written and ruled; and (5) a daily program and a term plan to which the daily plan can be referred.*

Realization of such a plan requires in part specific material, and such blackboard work as can be prepared before the children are to take up the lesson. The material usually needed includes paper, pencils, ink, pens, books, maps, specimens, apparatus, etc. It is not enough to have them. They should be ready for distribution or use for the day's work.

The series under the heading of material will be: *(1) blackboard, chalk, rubbers, etc.; (2) objects, etc., needed by the teacher, as, map, specimen, apparatus, etc.; (3) objects needed by the pupils, as, paper, pencils, pens, etc.; (4) arrangement and care before distribution; and (5) distribution.*

Inherent in a properly arranged plan and carefully prepared material are sequence and organization. This implies logical organization and psychological graduation. It demands due regard for possible interrelation of subject matter with other subjects, and for some correlation with the environment and the life history of the pupils. It requires gradation of work and a looking before and after as far as the children are concerned. First the subject is cut up into a number of general divisions. The topics may be arranged by weeks or by months. Then further subdivision will yield the method-wholes to be taken up in single lessons. The material must be graded, step by

step. Should interrelations be possible between subjects or topics, these are to be indicated. References to the daily life of the pupils, current events, general information which the children may have—anything which will lighten up and vivify the lesson—are to be noted.

Sequence and organization, therefore, include *(1) logical division of subject matter and arrangement by months and weeks; (2) interrelation between subjects; (3) correlation with the pupils' environment and life history; (4) correlation with the pupils' stage of development and previous instruction; and (5) gradation of subject matter.*

Finally, in every lesson a reasonable amount of promptness can be expected. If, for example, a lesson is planned for 10 o'clock, delay after that will lower the value of the preparation as far as promptness is concerned. If a lesson of 40 minutes is 10 minutes late, it seems fair to deduct 10—40 from the full value credited to promptness.

As a matter of justice to an enthusiastic teacher, 5, 10, or 15 minutes may be allowed overtime for a preceding lesson of 15, 30, or 45 minutes. Such adjusted time may be made the basis for the reckoning, and delay after that may be counted against the teacher.

If we allow 100 points for preparation, and 25 points for each of its main divisions, we shall have:

Preparation	100
Plan	25
Material	25
Sequence and organization	25
Promptness	25

If further particulars are required, the following scheme will apply:

Plan	25
General outline of work	*5*
Types and topics indicated	*5*
Time and method indicated	*5*
Neatness and arrangement	*5*
Daily program	*5*

Material	25
Blackboard, etc.	*5*
Objects required by the teacher	*5*
Objects required by the pupils	*5*
Care and arrangement	*5*
Distribution	*5*
Sequence and organization	25
Outline by months and weeks	*5*
Interrelation between subjects	*5*
Correlation with the environment	*5*
Correlation with the pupil	*5*
Gradation of work	*5*
Promptness	25
1-5 to 5-5 late	*20 to 0*
Starting point, 5, 10, 15 minutes after time planned for a previous lesson of 15, 30, or 45 minutes	

In the preparation of school work two common errors, even when the teacher is informed, are: (1) lack of preparation; and (2) lack of promptness. There are other deficiencies but these are usually due to

ignorance of what is expected. A new teacher, or one who is inefficient, will have no work ready, no plan in evidence, no material at hand, and will wear herself down with talk, talk, and then more talk—some of it lecturing on subject matter, and some of it hectoring on conduct. Her usual complaint is that 'she could teach if the class only behaved itself, if the school had better discipline.' Such a teacher should check herself up in detail under every one of the headings and subheadings given. The total of credits she would get would probably be rather small.

Lack of promptness seems chronic and needs constant watching. A lesson in arithmetic, for instance, planned for 30 or 40 minutes, may run over into 60, 80 or 100 minutes. Reading, planned for 20 or 30 minutes, may be kept up for an hour or more. Subjects like phonics, music, physical training, etc., are often neglected. A teacher who knows thoroughly one or more subjects and

who has an overdeveloped interest in them, very likely will be tempted to spend more time on them than is allowed. Subjects which may receive more time than is planned are, arithmetic, composition, reading, and, (when taught by an enthusiast), penmanship and drawing.

§2. *Incentives*

Work when properly prepared and presented to the children will of itself secure an adequate response. Such response, however, is of a purely individual character. From the social point of view, from the standpoint of completeness, any reaction, though satisfactory to the individual, requires further affirmation from one or more members in the social body to which he belongs, and whose power and influence he recognizes. It is here that the incentive comes into play. Individual response is encouraged and furthered on the one hand, or is discouraged and hindered on the other, according as the social

reaction is favorable or unfavorable, according as the individual is rewarded or punished.

The kind of incentive used is of importance. It may be mild, consisting merely of a look or verbal rebuke, or it may be severe, causing pain or distress of considerable intensity. To-day there is a general spirit of humanity which is regulating the infliction of punishment, and which is inclining more and more towards probation, parole, and allowance of 'another chance.' Similarly, on the side of reward, efforts are constantly being put forth to give each one his due, by means of cooperative systems, and schemes for task work with bonus, differential rate piece work, and the like.

To be efficacious, an incentive must be prompt, and certain. We all like to play with fate, hoping always for the best. But we sedulously avoid present distresses, and seek present pleasures. And children are no different. Often a gold star, or a credit,

or an expression of commendation given on the spot, will have greater weight with the child than more momentous occurrences which are to take place a month or more in the time to come.

Properly to apply an incentive it is necessary for the teacher to have a standard of excellence, and judgment in determining to what extent the pupil's work comes up to the standard set. A promiscuous and thoughtless use of incentives destroys their value. The children then no longer care—come what may.

In comparing one incentive with another, it is well for the teacher to consider how much effort will be required to apply it, and how universal will be its appeal to the children. The wider the appeal, and the easier the application of any reward or punishment, the more valuable will it be to the teacher in stimulating the pupils. The lack of these two qualifications is what make

prizes of so little value. Only a few pupils can get a prize.

Finally, the personal manner of the teacher, and the lack of personal animus when she rewards or punishes, do much to give incentives weight with children. A pupil instinctively senses favoritism, weakness, and lack of balance in a teacher. After a teacher has decided that a reward or a punishment is necessary she should give it, and that should be the end of it.

The excellences, which inhere in proper motivation, are: *(1) fitness and gradation; (2) promptness and certainty; (3) judgment and knowledge of standards; (4) distribution and appeal; and (5) a calm, firm, undisturbed, and considerate manner in the application of an incentive.* These five characteristics should be looked for no matter what incentive is used.

A device which works automatically and which is indispensable if good work is to be secured is simple checking up, counting, and

marking. This alone shows that the teacher has at least enough interest in the work or conduct of the pupils to see what they are doing. It further stimulates such pupils as are willing to take advantage of oversight or neglect on the teacher's part. The mark may vary from a check, count, or stamp, (as, star, flag, 'good,' 'excellent,' etc.), to correction on a percentage basis. Papers should be marked the same day and returned to the pupils the next. Written work can be checked up while the pupils are at it. Note books may be looked after by a pupil during lunch period. Or the teacher may utilize a study period for this purpose.

In such checking up, neither fear nor favor should influence the teacher. Work which is poor, slovenly, careless, or incorrect, is worth less than work which is precise, clean, neat, and correct. To secure the best results distinctions must therefore be made. The bully who thinks that an obstreperous attitude will increase his rating

can easily be met by further reduction in rating because of his uncalled for opposition. With proper explanation of the standard used, and uniform application to the work of all members of the class, the teacher need fear neither the importunate demands of pupils, nor investigation and comment by parent or principal.

Oral approval and public exhibition of good work and conduct are incentives which are easy to give, and of universal appeal. Such expressions, as, 'Good,' 'Very good,' 'Excellent,' 'Show it to the class,' etc., or their opposites, never fail of their purpose when rightly applied. As in the case of marking and checking up, approval and exhibition of work require judgment on the part of the teacher, a knowledge of standards, and their application in a firm, even, undisturbed manner.

Personal interest in the children and supervision of their activities are evident often in the manner of the teacher towards her

wards. Your little ragamuffin, so-called, feels neglect, or a shrug of the shoulders, or even slight, unintentional indifference, as much as does his better dressed, and apparently higher-keyed classmate. And he usually shows that he feels. A teacher can not, therefore, be too careful in her manner towards her pupils, in her attention to their wants, in her readiness to help them over the rougher portions of their work. Personal interest has much in common with the incentives discussed in the preceding paragraphs, and includes the same excellencies, namely, gradation, promptness, judgment, etc.

Individual aid given to pupils, either in group or alone after sessions, is a pointed form of incentive which combines justice with charity. The weak pupil is not singled out and made a mock of before his neighbors. He need not shrink from their scorn or contumely. Such aid or detention should be applied promptly and with certainty. There need be no feeling in the matter. In a calm

and equable manner the teacher points out what faults exist whether in lessons or conduct, what work is to be done, and devises means to assist the pupil in overcoming his faults.

Listing the incentives discussed above, and assigning values, we have the following:

Incentives	100
Marks and checking up	25
Approval and exhibition	25
Supervision and interest	25
Individual aid and detention	25

In detail each of these incentives can be considered with regard to the characteristics given below, with a value of 5 for each merit:

Fitness and gradation	5
Promptness and certainty	5
Judgment and standard	5
Distribution and appeal	5
Manner of the teacher	5

A common error in the use of incentives is a failure to follow up the work or the con-

duct of the pupils. They may continue to do poor work, hand in carelessly ruled, dirty, or incorrect papers, submit written spelling books which contain innumerable errors in spelling, or even hand in no work at all. Unless the work is checked up there results a general demoralization in the activity neglected. What is true in instruction holds with equal force in discipline. Offenses which are allowed to continue unchecked may develop into disorder and riot.

A lack of human interest shown by the teacher is often found in some classrooms. The steady silence, lack of comment, social barrenness, and inhuman indifference are most oppressive to one filled more or less with human kindness. If the teacher would only smile, meet the inquiring look of the pupils with a kindly glance, a friendly tap, or a look of approval, one would feel that the pupils might consider school life more worth the living. It is not much. But the effects are remarkable. Good class spirit and uni-

fied class action roll along apparently without drag or drive. The pupils then feel that the teacher is alive, is human, has interests much like their own, and that they themselves are not a species distinct, a kind of animal, as it were, to be held in subjection.

Occasionally the best of teachers, while trying to finish up some work or while disciplining an unruly pupil, may lose her head, and may nag, yell, become sarcastic, threaten, or stir things up with unnecessary violence. One may sympathize with such a teacher. But one must acknowledge that little is accomplished in such a case. The teacher will simply wear herself down with outbursts of uncontrolled fretfulness or anger. Loss of self-control is a common complaint among teachers and would seem to indicate at times, ignorance of method, and often, heavy pressure due to lack of power and to untoward conditions in general.

§3. *Visual Appeal*

Appeal to the eye implies the use of blackboard, chart, map, perception card, object, model, specimen, apparatus, etc., in the proper manner. What is shown to the pupils must in itself be clear and distinct. Distinctness refers to the unity of the object as a whole, while clearness inheres in the arrangement of the parts and in their general simplicity and organization. It is not enough that an object be shown. It must be such an object as stands out prominently, with each of its parts limned in a striking, vivid manner. The more important aspects may be emphasized in various ways, as by difference in color or size, by underscoring, by use of signs, print, etc. All this implies the use of a proper background as regards the material, and a proper seating and grouping as regards the pupils. The different excellencies in a lesson will be diminished if the pupils are scattered about the

room and outside of the best angle of vision. Good seating and grouping may be had by massing the pupils the long way in front of the object, or by arranging them in a semicircle around it. Good backgrounds are, white for black, black for white, and black or white for green, red, or orange. Finally, sufficient time should be allowed for the pupils to observe the model in front of them.

Arranged in a series, the points of excellence in the presentation of a model are: *(1) clearness and distinctness of the material shown; (2) proper emphasis of parts; (3) correct placing of the model before the pupils; (4) seating and grouping of the children; and (5) allowance of enough time for observation.*

Given the matter to be observed, the pupils must further understand what it is all about. What connection has the material to the entire subject? Is the topic presented as a separate entity, an isolated unit, or is it hooked on to what the pupils know? Are

there any incidents or experiences in daily life to which the model applies? Can other subjects be called in to illustrate and explain the object under observation? In short, are there present sequence and organization?

Serially analysed, sequence and organization show the following aspects: *(1) relation to the subject as a whole; (2) interrelation with other subjects; (3) correlation with the environment; (4) correlation with the pupil; and (5) gradation of the steps in which the matter is presented.*

Further consideration of the model will result in analysis and synthesis; analysis into its parts, proper emphasis on the characteristics and uses of its members, and a final synthesis into the original whole with which the lesson began. This procedure holds whether the model is an example in arithmetic, a sentence in grammar, a problem in history, a visualization of the map in geography, or a study of scientific or other apparatus. The model is shown and ex-

plained in general. Then step by step, it is taken apart, and characteristics, uses, etc., are discussed and explained. Further comparisons may be made between parts, parts and whole, etc. Finally the parts are unified, and cast into the original whole.

In a series of excellencies for analysis and synthesis we have: *(1) presentation of the model as a whole; (2) presentation of its parts; (3) comparison of the parts with the whole to show structure, use, development, processes, etc.; (4) putting of the parts together; and (5) allowance of sufficient time to appreciate fully each step.*

All these things can not be done in dumb show. The teacher is compelled to talk, answer questions, point out things, call upon pupils, do and say things even while the visual presentation is being made. Voice and manner therefore demand a place in the series of values to be given to a visual appeal. It is imperative for the teacher to answer questions, to stimulate questioning

by the pupils, to call their attention to important parts of the model, to present correlated problem work, to encourage response and individual effort of every kind. Often an introduction is needed. Sometimes a silent attitude will excite an interest in the model. Above all, a patient and cheerful manner is required lest the lesson become a perfunctory one, and lest response by the pupils be checked.

Voice and manner may be said to include the following as far as the visual appeal is concerned: *(1) patient and cheerful manner; (2) proper introduction of the model; (3) necessary explanation; (4) answering questions; and (5) encouraging questions by the pupils and getting them to express themselves.*

In summary we have for the visual appeal:

Visual appeal	100
Blackboard and model	25
Voice and manner	25
Sequence and organization	25
Analysis and synthesis	25

In detail each subheading may be further analysed as follows:

Blackboard and model	25
Clearness and distinctness	5
Proper emphasis	5
Position of the model	5
Grouping of the pupils	5
Time allowed	5
Voice and manner	25
Patience and cheerfulness	5
Introduction	5
Explanation	5
Answering questions	5
Encouraging pupils to react	5
Sequence and organization	25
Relation to the subject	5
Interrelation with other subjects	5
Correlation with the environment	5
Correlation with the pupil	5
Gradation of work	5

Analysis and synthesis	25
Presentation of model	*5*
Presentation of its parts	*5*
Comparisons made	*5*
Reconstruction of model	*5*
Time allowed	*5*

The great error in the presentation of visual material is a lack of such material and an attempt to substitute for it, words—words, singly and in avalanche. Instead of showing a problem on the board and working it out step by step, the teacher may talk tell how to do the work, refer to rules or definitions, and the like. For visual study of the map, the pupil may have to listen to more words, or may be compelled to read matter which can be given with a few strokes of colored crayon, and which should be so given. Often material is not at hand because it may require a little extra effort to get it or to make it. Maps, charts, perception cards, simple apparatus, specimens, etc.,

can readily be obtained and are well worth the trouble.

Good blackboard work is essential and lack of it is without excuse. Writing which stands out sharply against a clean board, proper use of colored chalk, ability to sketch simply and rapidly, these can be reasonably expected of the class teacher, whether she is a beginner or not. No tolerance should be shown for grey, smeary blackboards, for writing by children who can not write distinctly, when such writing should be done by the teacher, or for the common excuse, "I never could draw."

In the general use of the visual appeal a host of errors creep into the teacher's work chiefly because of a lack of preparation or a lack of thought. The pupils may not be allowed to react naturally, to see things at first their own way, to ask questions apparently irrevelant, to talk spontaneously and naturally. The teacher may be impatient and attempt to hurry the pupils on, to drive

them as it were into the narrow groove of her own advanced and logically arranged knowledge. There may be a lack of proper correlation with the pupils' life history and experience. Parts of the analysis and synthesis may be incomplete or entirely lacking. Increasing knowledge and a rigid study of standards will help to remove such deficiencies.

§4. *Oral Appeal*

Two forms of oral appeal are (1) question and discussion, and (2) the story, informal talk, and lecture. Questioning requires preparation and can not be made up 'as you go along.' The language of a good question will be clear, terse, and to the point. There will be no verbiage, unnecessary remarks, nor preliminary sputterings so significant of lack of preparation, and of a general ignorance of what is to be asked next. As regards the content of the question, it should point in one direction. It seems only fair to the

children that it admit of but a single answer. As it is assumed that the question has been formulated with regard to some logical whole, that it has connections with what went before and what is to follow, so it is expected that one question follow the other logically, and lead onward to further discussion and oral work on the topic under treatment.

After the question has been formulated and presented, it requires time to sink in, to allow for response. The teacher may simply pause, and call for answers from the pupils. Better, she may pause, glance rapidly round the room, eye pupils who seem to be inattentive or indifferent, and call for the response. Or still better, she may make such a dramatic use of her hands, countenance, and general posture that the class is stimulated and anxious to react.

Arranged in order of merit, the excellencies of the question as such will be: *(1) relevance and general fitness to the subject*

in hand; (2) clearness and terseness; (3) point and directness; (4) simple pause before delivery; and (5) pause with dramatic attitude, as shown by the teacher's eyes, position, and general posture.

The story and informal talk follow the same degrees of merit as inhere in the asking of questions. The story must be apropos. It is one thing to tell stories, it is another thing to narrate something which has specific reference to the onward progress of the subject matter of the lesson, or which has a particular cultural or ethical value of its own. Language which is simple enough for the children to understand, which is clear to their minds, and which has sufficient variety and allusions to render the tale lively and attractive, will add greatly to the success of any narration by the teacher. Moreover, the story as such should move, should have a beginning, a middle, and an end. Point and directness are required as in the case of the question.

Proper pause lends greatly to the interest of a story, and in many cases may make or mar the tale. Intonation, dramatic gesture, smiles or scowls as the case may be, these give life to the narrative, and drive home the more important aspects of the tale. In fact, one can recite the multiplication table to the children or read a laundry ticket in such a manner as to hold a class wrapt in attention. The story is told of a recitation in French delivered to an American audience by Sarah Bernhardt, with such vividness and feeling as to make many of the audience weep—yet she confessed later, that, nonplussed for the moment as to what recitation should be given, she decided on delivery of the multiplication table.

As in the case of the visual appeal, voice and manner need consideration but from a different point of view. Proper use of the voice demands considerable training. It may express life and action, or may become a monotonous drawl significant of sleep and

inanition. It may range from soft and low, to loud and high. It may go, now slow, now fast. This often requires a studied control on the part of the teacher. Side by side with such control should go a fitting attitude. It is necessary that the teacher be self-contained, that she be able to direct her expression, facial and otherwise, into the same groove as runs the question, or goes the story. A smile, a frown, a look of surprise, a show of anger—each will express facially what the words convey.

Finally, proper gestures are a consummation devoutly to be wished. In the use of the hands, training is needed as much as and often more than it is required in vocal and facial expression. When should the hands be quiet, and when should they move violently in the air? When should the finger be pointed, if not in scorn, at least in indignation at a reluctant or recalcitrant pupil, and when should there be no motion of any kind? When should the teacher lean for-

ward and be confidential, and when should she be distant and austere? These are questions which should be decided properly by a class teacher.

Voice and manner may be resolved into the following aspects: *(1) use of voice, whether soft or loud; (2) use of voice, whether low or high; (3) use of voice, whether slow or fast; (4) facial expression; and (5) posture, gesture, and use of hands.*

The five aspects of sequence and organization which apply to question and story are, as already discussed: *(1) relation to the subject, discussion, or topic as a whole; (2) interrelation with other subjects or topics; (3) correlation with the environment; (4) correlation with the pupil's life history and experience; and (5) gradation.*

Each question should be one of a series, each moment of the story should rise naturally out of what has gone before. This is necessary if the matter is to grip the pupils. One is reminded in this connection of the

monk who listened, as he thought, but for a moment, and found that a thousand years had passed away. Wherever matter in other subjects may be called in to illustrate and vivify what is being presented, it is reasonable to expect such interrelation. Both question and story should have a setting in the race experience, should come into contact with actual life, should, if necessary, touch nerve centers in the spiritual life of the child. The old adage about the fool and his questions refers to a neglect of this rule. A good question, an interesting story, a heart-to-heart talk, will not be followed by the blank stare or the tired yawn which indicate so well how the presentation is being received, and, in most cases, of what particular worth it is to the children. They fail to see the connection. There is then no appeal to curiosity, to previous knowledge or other basis which can be stirred. Finally, a proper sequence demands that the questions be asked slowly, one point being required at a

time, and that the story move onwards, step by step. A class will then not fail to grasp the meaning of the present moment because of failure of the teacher to lead up to it.

In all oral work the great danger is that the teacher keep on questioning and talking like an animated machine, that she fail to allow the pupils adequately to respond. If a question has been carefully thought out and prepared it is worth something. It should not be allowed to pass unanswered. It should be made to do its duty, to work. Adequate response implies that not only is the question answered, but that it also is answered by a number of pupils correctly, by six, eight, ten, or by the whole class, rapidly, one by one, if necessary, as in drill. While the answering is going on, the teacher simply leans back and listens, and corrects or commends when need be.

Furthermore, to get good value out of a question one must see that it is properly distributed. Pupils may be called upon at ran-

dom, now this one, now that one, now one who is ready, now one who does not expect it, now by pointing at a pupil and again by calling him by name or by indicating by a friendly nod who is to recite. From time to time it is advisable to find out which pupils have not been called upon at all during the day. A teacher will usually be found to possess a personal equation, and, either because of her position in the room, or because of temperament, will systematically overlook a group of pupils. They will be found never or seldom to have a chance to recite, and may so complain later.

To rate the teacher on response of pupils, one has simply to count the answers and give them a value on the basis of the number to be expected. The answers given will vary, according as there is no answer at all to the question, or as there is a continued connected talk given by several pupils on the same topic. Different kinds of errors will be found in the answers given by the pupils.

Flippant or careless answers, answers given in haste or at random, guesses, ungrammatical expressions, continued yes—no responses, incomplete answers—all these are to be considered as incorrect. If five answers can be expected in response to the question which has been put, one fifth should be deducted for each error. If ten answers are a reasonable number, each mistake counts a tenth off, and so on to the whole class, if the lesson is one of drill.

A similar numerical basis can be used to determine what the response is in story telling. Use the number of pupils in the room as a basis, and count the pupils who yawn, squirm, play with objects under the desk, look out of the window, talk, or show in other ways that the story has little or no appeal. If there are ten such pupils out of a class of forty, this will cause the teacher to lose a fourth of the credits assigned to response.

Summarizing the points above presented, we have the following:

Oral appeal	100
Question-story	25
Voice and manner	25
Sequence and organization	25
Distribution and response	25
Further details give:	
Question-story	25
Relevance and fitness	*5*
Clearness	*5*
Point	*5*
Simple pause	*5*
Dramatic emphasis	*5*
Voice and manner	25
Use of voice: soft to loud	*5*
Use of voice: low to high	*5*
Use of voice: slow to fast	*5*
Expression of face	*5*
Use of hands and body	*5*
Sequence and organization	25
Relation to subject or topic	*5*
Interrelation with other subjects	*5*
Correlation with environment	*5*
Correlation with pupil	*5*
Gradation	*5*
Distribution and response	25
Measure on a numerical basis	

Whether a teacher has been trained within the system in which she teaches or outside of it, whether she comes from a training school or from a college, whether she is experienced or inexperienced, seems to influence her oral work but little as far as errors are concerned. The same glaring inefficiency, when present, appears to be distributed about evenly among the different types of teachers. According to the accounts found in the works of great educators, mistakes in oral presentation probably have persisted from before the time of the middle ages through the present day. Several of the more common types of error can be specifically defined.

An error which is frequently met with is a lack of pause after the question has been put to the class. The teacher seems in a hurry to get a load of verbal matter out of her system, and goes ahead quickly whether or not, as tested by adequate response of the pupils, the children are following. Sometimes one

question is given right after another, or a medley of questions tumbles out, before any answer is even possible. Added to this lack of pause is often a monologue type of work, in which the teacher not only sets the question, but answers it herself; or, what is almost as bad, lets only one pupil answer it, and then herself repeats the answer. "What is 6×8?" "Yes, 48." "Who discovered America?" "Yes, Columbus discovered America." So the teacher goes on, doing almost all of the talking.

Neglect of the class as a whole is a mistake which often leads to disorder. The teacher may stare at the pupil and overlook the rest of the children. Sometimes a teacher may focus her attention so closely on the boy who is reciting, that she does not see flagrant disorder within a few feet of her. She does not seem to remember that one can watch the class and listen to the pupil who is answering at the same time. The class is similarly disregarded when the pupil is called by name

before the question is given, or when the 'next boy' is called upon to answer. As soon as the class knows who is to recite, that lets out every one else, as far as response is concerned. To 'keep the pupils guessing,' as it were, the question must be presented first before any one knows who is to be called upon.

Chorus answering is good at times to wake up the class and to encourage the more timid pupils. But it should not be run into the ground. If the chorus answer is allowed, it is necessary to insist on sharp, snappy answering, and to reinforce it by individual questioning. The yes-no answer is subject to similar limitations. Continued yes-no answers may be considered as errors. They should be used only when it is necessary sharply to define a topic, or to shut out aimless and incoherent thinking. More extended responses should then be required.

Errors of omission are occasionally found. There may be a lack of sequence in the ques-

tions which are presented. There may arise unnecessary digressions from the topic under discussion. Very often there is no topical recitation when the subject calls for it, as in the case of composition or history. The teacher is so anxious to help the pupil that she seems unable to remain silent, to let the pupil go on, without prompting by her.

A study of the question, as such, will show a variety of errors in the general composition. Several are worthy of notice. The vague, indefinite question is a pest. It usually shows, on the part of the teacher, ignorance of subject matter, or at times, a sudden spurt for the purpose of making a good impression upon the entrance of a visitor. "Tell all you know about Boston," is a somewhat indefinite manner of asking for information on the manufactures, or the climate, or the location, or the population of Boston. A careless use of such expressions, as, "What did he do when, etc.," "What hap-

pens when, etc.," "What is, etc.," also leads to senseless questioning. The double barrelled question is confusing because it contains too much. "Why did Washington cross the Delaware, and what did he do when he got there? Give the results," can be broken into three or four specific questions. If to such a complicated question there are added remarks like the following: "Hurry up. We're waiting. Didn't we study that last week?" the pupil can hardly gain in clear and consistent thinking.

In story telling a few errors may be pointed out. Usually a story is to be told, not read out of a book. Nothing is more pathetic than the sight of a teacher killing a good story—droning it out of a book, and indifferent to the response with which the story is received. Even when the story is such a one as requires telling in the actual words of the book, it should be read in part with appropriate gesture and dramatic action. In both questioning and story telling

it is a good practice to write from five to ten topics or questions which are to be presented in the lesson for the day. Nothing tends to clarify thought more than expression in writing, and careful reflection over what has been written, both before and after.

§5. *Manual Appeal*

When manual work is given to the pupils it should be arranged in a definite manner. Specific merits to be noted are the following: *(1) writing of name and date on paper, label or tag; (2) margination, ruling, setting, and general formal arrangement; (3) spacing, grouping, and proportion of the material used; (4) neatness and order; and (5) cleanliness and freedom from blots, dirt and filth.*

In arithmetic, arrangement of the written work calls for ruling or folding of the paper into boxes, with reservation of space for name, date, and class at the top of the paper, and for number of the examples and their

answers at the sides of the paper. Composition, spelling, dictation, and similar written work should show margins, name and date, and proper spacing. Written work which does not completely fill the paper need not be jammed close to the top with all the space at the bottom. Several lines may be left empty, 'skipped,' if necessary, to ensure good spacing. Any paper which has on it a blot, smear, finger mark or dirt of any kind is to be counted out as regards cleanliness.

Shop work, clay modeling, painting, sewing, cooking, etc., can each be judged according to the scheme of excellencies enumerated above. If the name and date can not be placed upon the work, a tag or a label can be used for this purpose. In addition to the name and date, it might be well to have the children indicate the amount of material used, the time spent, and the cost of the whole. Just as written work is set in a margined frame, as it were, so shop work, clay, sewing, etc., can be set on a background, or

kept in an envelope, or preserved in a box or other receptacle.

Proportion of parts, grouping, and harmony are to be looked for in the arrangement of the material. The size, structure, use, and substance of what is being made should bear the proper relations, one to the other. System and order are necessary if the lesson is to proceed expeditiously, especially where a large quantity of material is to be used. This should be placed within easy reach of the pupils. Each pupil should know how to set up his desk, arrange his tools, and place his material so that he can work without confusion. Finally, the work should be free from dirt, unnecessary litter, and 'muss.'

In manual work, sequence and organization can be resolved into the same details as those given for the other appeals, namely: *(1) relation to the subject or topic as a whole; (2) interrelation with other subjects; (3) correlation with the environment; (4)*

correlation with the pupils' knowledge, experience, feelings, and desires; and (5) gradation in the presentation, step by step.

In a great deal of the manual work, sequence and organization constitute an important part of the method. In arithmetic, a lesson degenerates into mere time-killing if the examples are not graded in difficulty, and if too many types are presented at once. Much of the problem work will appear barren to the children if it has little connection with real conditions outside of the school. The concrete details which go to make up most of the number experience of the child may not be adequately utilized in the classroom. These points must be carefully watched if arithmetic is to be properly taught.

Composition, dictation, spelling, and grammar require similar care in planning for sequence and organization. Grammar and spelling have more meaning if taught in connection with composition. Composition

has more life if it is based upon the experiences of the children, and upon subject matter which has been presented in other lessons. Dictation becomes an ally to composition when used to teach specific aspects, as, paragraph structure, use of the simple sentence, correction of the 'and' obsession, etc. Composition work in general can bind together many units in the curriculum.

Similar values inhere in a sufficient and proper presentation and direction of other manual exercises. Whether the work consists of abstract arithmetic or the more concrete shop work, whether the children are struggling with concepts and written work, or with cooking, sewing, or modeling, some relation to life must be present in the work, some connection with the children's experience is necessary, if the presentation is to be considered successful. Finally, gradation step by step is a requisite if the children are to work without confusion.

While the children are busy, a rapid checking up will show that some of them seem unable to do the work correctly. It is necessary closely to supervise pupils to prevent them from repeating mistakes in going from one step to the next. Mentally, the teacher should group the weaker pupils, and halt them when they go wrong. If necessary, the entire class may have to be stopped before completing a step, because most of the pupils are doing their work wrong. If the work is arithmetic, it may be necessary to work the problem over with the class, and call for a show of hands, step by step. In composition, it may be imperative to spend further time on oral work and discussion. Further explanation may be needed or greater simplification demanded in sewing or in cooking. There is no sense in letting the children go ahead if they are not working correctly. Occasionally a teacher is found who will allow the whole class to work a series of examples of similar type, or to

analyse several sentences of the same kind even though mistake after mistake is made. Repetition of such errors can readily be avoided by simple supervision and checking up at the start.

Correctness and incorrectness can be measured while the pupils are busy at their work. A show of hands or supervision of the children while working will indicate the number whose work is incorrect. A rating can then be given on a numerical basis.

In manual work voice and manner constitute a series of excellencies like the series given for the visual appeal. These merits are enumerated below.

The different aspects of the manual appeal are the following:

Manual appeal	100
Form and arrangement	25
Voice and manner	25
Sequence and organization	25
Correct and incorrect	25

and in detail:

Form and arrangement	25
Name and date	5
Margins, ruling, setting	5
Spacing, proportion	5
Neatness, order	5
Cleanliness	5
Voice and manner	25
Patience and cheerfulness	5
Introduction	5
Explanation	5
Answering questions	5
Encouraging pupils to react	5
Sequence and organization	25
Relation to the subject	5
Interrelation with other subjects	5
Correlation with environment	5
Correlation with pupil	5
Gradation	5
Correct and incorrect	25
Numerical basis	

On the formal side of manual work the leading error is the assumption by the

teacher that the children ought to know where to put the name and date, how to rule, and in general, what to do with the material given to them. The children may arrange their papers half a dozen different ways. The teacher may fail to see that in the beginning it is necessary to show pupils how to fold paper, where to place the ruler to rule a line, how to arrange material on the desk, where to place the body of the written work, and so on. Investigations on motion study have shown that considerable time is wasted because material is not placed within easy reach nor arranged in a carefully planned manner.

On the side of content the errors are more numerous. Teachers will persist in confusing pupils with too many type examples in a single lesson, or with problems which are too difficult because of a lack of gradation in the presentation. It seems reasonable to ask that only a single new type be presented in a development lesson. If the pupils can not

do one, how can it be supposed that they are able to do several? And even in the case of the single type, at some stage there must be a difficulty for the children. It is exactly this stage which should, by graded work, be found out. If the class can do the examples, then the lesson is not one on new work, but is one of review or of drill.

Composition is often required when the pupils have really nothing to express. A number of facts may hurriedly be given to them which they are asked to vomit forth in paragraph form. If the material is new, strange, and weird to the children, they can hardly be expected to have much energy or inclination for composition, as such. The same is true in the case of sewing, of cooking, of drawing, and the like. The lesson should have some connection with the life history and development of the child. The work should be such as can be done in the home or such as has some connection with the home.

A lack of proper grouping and of assistance results when the correct and the incorrect cases are not checked up by the teacher. Each step must be supervised. Pupils who are wrong may be aided at their desks or sent to the board as a special group, where they can be closely watched. Special work of simpler nature may be necessary for these pupils.

Any appeal may be abused, but the manual appeal lends itself more easily than another to untoward uses. Manual work is a good time-killer. It is so easy to ask the pupils to 'do the next ten examples' in arithmetic, or to assign a number of sentences for analysis, or to have them copy verbatim accounts out of a history or geography, or write up notes in cooking or science, or answer questions at the back of the chapter, etc. Much of what the children are required to write in the shape of notes can be expeditiously given to them in the form of duplicated outlines. An inspection of note books

will show just how accurately any notes given to the pupils are copied by them, and a watch will indicate exactly how much time is wasted in the process. Such errors can be checked if the principal will follow a lesson in the same subject for a series of days. It will be possible then to trace the development of the topic, the use of the different appeals, and the kind of drills, reviews, and tests that are given.

§6. *Application and Technique*

Whether a teacher wishes to check up her own work or whether she is to be checked up by a superior, it would be unwise, at first, to use the complete scheme as outlined in all its detail. Only the main five standards, *Preparation, Incentives, Visual Appeal, Oral Appeal, and Manual Appeal,* should be used. Nor need any numerical values be employed. Checks or crosses with a few helpful remarks are all that are at first needed.

The further divisions may then be applied. It is evident that all the characteristics and excellencies will not apply to every lesson, and that all the details under one of the main headings may not be required in the process of inspection. Again, numerical values need not be given in the beginning. Four marks (✓ × — ?) may be placed alongside the appropriate merit; according as the excellence is present, (✓); is not present though necessary, (×); is not at all applicable to the lesson, (—); or is in question and needs examination, study, and application, (?). Further familiarity with the standards will allow of rating on a numerical basis. For the sake of accuracy and convenience a table of values for different registers or attendance has been worked out on pages 33-35.

When printed blanks such as are inserted in the book are used, an inspection of a lesson will take from three to ten minutes. After the inspection has been completed, a

carbon copy is either left with the teacher, or sent to her later in a sealed envelope. It is to be remembered that inspections should result in improvement, and that such improvement is not possible if the teacher does not know what it is all about, and works in the dark.

To determine whether a topic has been presented completely, that is, has been developed, reviewed, drilled upon and tested, it may be necessary for the principal to follow up the topic in the one class for a succession of days. This is often necessary in the case of reading, arithmetic, or composition, to name a few subjects in which a single lesson may yield an incomplete or false impression.

It is to be noted that the teaching process applies equally to instruction and discipline. Discipline requires presentation in much the same manner as does instruction, and the same appeals must be made. The teacher must define her field, prepare her material,

talk to the children, have them see illustrative matter, etc., whether the topic is one in ethics and social control, or one in arithmetic or drawing. It is a mistaken notion with many new teachers that discipline in some mysterious fashion drops into the room from above, and that the teacher can expect to find it present as soon as she enters, all ready for her convenience. No doubt the pupils carry with them much of the training they have already received, but this does not preclude further efforts by the teacher to lead the pupils along the right paths.

III

PERSONALITY COOPERATION

V

PERSONALITY—COOPERATION

§1. *Personality in General*

Any individual who is considered as having a 'wonderful personality,' as being 'charming,' 'captivating,' or what not, creates such an impression by a series of reactions each of which can be analysed out of the total complex and studied. In many social maneuvers it is somewhat pathetic to see how few and how petty may be the shifts and devices employed to create one impression or the other. No matter what one's original nature may be, one can develop or create practically any personality.

In the measurement of a phase of personality it is important to appreciate fully what basis is used. In social life, personal behavior is adversely judged solely by exceptions. We are all expected to be good and

honest, and we receive little credit for these attributes. But let a single exception occur, and rumor, than whom no pest is swifter or more active, spreads broadcast our fall from virtue. This single exception may be sufficient to ruin what was before considered a noble character, to nullify, it may be, all the good work done in a life time. A cashier, for example, no matter how talented, no matter how long and meritorious his services, falls at once from grace if he commit but a single theft. Forthwith, a man of religious reputation will lose his good name if he is seen at any time under the influence of liquor. And in less degree the same thing holds true. We can not average character, conduct, and personality, as we do results in arithmetic. We expect full merit, and condemn upon a single fault.

Social judgment has been somewhat severe in this connection and will doubtless continue to be so. There is, however, a tendency towards a more liberal attitude in the

treatment of social offenses. Many seem willing now that an offender try again, make up for past offenses, and report from time to time on parole. In measuring the personality of the teacher in school it seems wise to adopt this newer liberalism. One should not be too anxious to condemn. One should allow several fresh starts, and should wait patiently to see what improvement there may result.

§2. *Towards Pupils*

By being helpful and by showing a personal interest in their welfare, a teacher can begin to create a personality in the classroom as soon as the new pupils enter. She can show the hesitating newcomer where to place his things, how to find his place, etc. She can carefully instruct the children where to go at dismissal, how to come up when the lines enter, and how to reach the different parts of the building. During the

course of the lesson the pupils will feel this helpful attitude if they receive material promptly, if their questions are quietly answered, if, in short, the teacher allows no untoward circumstance to escape her. Direct sunlight in a pupil's eyes or on his paper, seat near a hot radiator or in a draught, desk too high, etc., are material conditions which may cause much distress. Strained gaze, sickly or worried look, suspiciously flushed face, an open sore, or bandaged face or hand may indicate abnormal circumstances which merit inquiry and perhaps further investigation. A number of little acts of attention, unremembered though they may be, will make the children feel that the teacher has an interest in their well being, and will cause a warm glow to spread throughout the room.

Helpfulness and personal interest towards pupils may be shown in the following particular instances: *(1) personal comfort; (2) physical well-being; (3) requests of the children, and their general social needs; (4)*

mental shortcomings, weaknesses, and individual differences in instruction; and (5) material wants, supplies, etc.

Patience and sympathy are often required to keep alive a persistent attitude of helpfulness and personal interest. Like silken ties they bind heart to heart, and mind to mind. In her general attitude and expression the teacher will show that she is one with the class. The happy contented looks of the children are a reflex of this state of harmony. Objectively, such a condition is evident by the smile, the low responsive voice, the friendly touch, and an even control which is not put out by any petty annoyances. These excellencies do not preclude the sharp, stern tone of controlled indignation, nor the reasonable outbursts of feeling which are necessary at times to meet the wayward reactions of a few tumultuous and tempestuous children. Without such a check on sympathy, in fact, it is often mistaken for weakness and may lead to a lack of respect.

The different merits inherent in patience and sympathy are: *(1) personal contact with the pupils; (2) a soothing voice; (3) an encouraging manner; (4) clemency and a disinclination to use severe measures for trivial offences, or first occurrences; and (5) firmness.*

A character which is tempered with sweet reasonableness will have a modicum of humor and a generous supply of cheerfulness. A teacher who has no sense of humor will be unable to develop a personality of the highest type. Many of the incidents in school life which loom to the greatness of tragedies in the brooding consciousness of a moody teacher, become absorbed in the solvent of humor and disappear in the general atmosphere of cheer.

Further analysis of cheerfulness and humor will yield the following virtues: *(1) an even temper, and general lack of irritability; (2) tact, and an absence of blundering management; (3) reasonableness in demands,*

and appreciation of the difficulties which beset children in their work; (4) toleration for their errors and for honest effort, even if not wholly successful; and (5) ability to get a proper point of view, and see things in the right light.

Voice, language, dress, and manner, even on the purely formal and physical side, help greatly to form personality, in many instances, are all that go to make what is considered personality. The teacher should dress well. Not only should she be a model whom the children can safely follow, but her very appearance should be of a kind that attracts the pupils towards her. And dress does much to make this possible. The teacher's manner towards children should be such as she shows at home or on the street to her relatives or her friends. It is not a loss of dignity for her to say, "Please," "Thank you," "Excuse me," etc., even to the tiniest of mites, or to the scrubbiest of pupils. Her language, while at times it need

not disdain the patois of the street, should always be within reach of the dignity afforded by distinct enunciation, careful pronunciation, slow delivery, and dramatic emphasis. For the children under her care, nothing is too good in this connection but the best.

Voice and manner may therefore be said to include: *(1) good breeding; (2) courtesy, with all that that implies; (3) the use of correct English; (4) proper appearance and dress; and (5) neatness in person and in general belongings, as, desk, room, etc.*

Summarizing the important excellencies which go to make up personality in its relation to the pupils, we have:

Personality towards pupils	100
Helpfulness and personal interest	25
Patience and sympathy	25
Cheerfulness and humor	25
Voice and manner	25

Details are as follows:

Helpfulness and personal interest	25
Personal comfort of children	5
Physical well-being of children	5
General requests and needs	5
Mental shortcomings, individual differences	5
Material wants, supplies, etc.	5
Patience and sympathy	25
Personal contact	5
Soothing voice	5
Encouraging manner	5
Clemency	5
Firmness	5
Cheerfulness and humor	25
Even temper	5
Tact	5
Reasonableness	5
Toleration	5
Point of view	5

Voice and manner	25
Good breeding	*5*
Courtesy	*5*
Use of good English	*5*
Dress and appearance	*5*
Neatness and tidiness	*5*

Since error is the chief measure of lack of personality, both error and measurement can be treated together. Striking instances in which the teacher fails to be helpful to pupils are the following: (1) indifference to reasonable requests for help or for information; (2) neglect of the personal comfort of the pupils, as, when the sun shines on their papers or in their eyes, when they are cramped in seats too small or compelled to write on desks too high, or when they are required to sit with 'hands behind backs,' or with hands folded upon their heads; and (3) disregard for the physical welfare of the children as shown by a manifest insensibility to open sores, flushed faces, strained look or attitude which may be due to defect in sight

or hearing, and by an indifference to such untoward conditions as wet clothing, aisle blocked with window pole or other object nicely placed to trip up passersby, etc.

Many objective signs thrust themselves upon one's notice when there is a lack of patience and sympathy between the teacher and the children. There may be open sneers, sarcasm, and public abuse. The teacher may coolly point to a child and remark loudly to a visitor, "Yes, he is my stupid boy," or she may indicate a line of pupils with the comment, "This is my defective row." When a teacher constantly refuses to come near to a pupil, or to allow him to approach close by her, when she seems unable to smile, or to respond to the advances of children, or to encourage such advances, it is safe to assume that she has made little effort to develop sympathy between herself and the children. The other extreme will be found where a teacher seems afraid to assert herself, to call sharply to order a palpable delinquent, or to

admonish, firmly and forcibly, any child who will not respond to gentler suasion.

When cheerfulness and humor are marked by their absence, the result quickly shows in the teacher's voice and manner. A querulous note is detected in her manner, and a peevish, fretful attitude becomes manifest. The children are continually harried by directions, and a rain of 'Don'ts' descends upon their heads. There is present a tendency to nag and to overvalue slight breaches of discipline. The teacher does not mean to be unjust, she does not intend to be hasty she may really consider that the occasion calls for her outbursts of censure, and for her continual complaints and importunities. But she errs in not seeing incidents in the right perspective, in not having a proper point of view, in lacking a sense of humor.

A lack of courtesy towards pupils, a disrespect in the manner of treating them, a general disregard for such amenities as are required in social life, etc., may be considered

as errors in voice and manner and checked up against this aspect of personality. Incorrect pronunciation, slovenly English, or a continual use of slang in an effort to be familiar, are bad. Dirty linen, clothing marked by grease or other spots, unshined shoes, careless coiffure, etc., may seem outside of the pale of criticism in the academic atmosphere of the classroom, but they demand just as close inspection as is accorded them in business life outside. Occasionally among teachers (men as well as women) a chewer of gum is found. In such matters one must have in mind reasonable standards as well as the feelings of the teacher. A teacher who is so careless or so ignorant as to offend in the particulars mentioned should have her attention called to them.

On the occurrence of the first offence, a question mark placed under the proper heading, with a definite statement of the error committed, will be sufficient to cause reflection and efforts at correction. The

statements should simply give the fact without further comment, as, "Five pupils writing on desk with sun on paper," or, "Smith's face flushed. Sickness?" or, "Sigs for six, goner for going to, keepin for keeping, etc.," or, "Why call the boy defective, in front of the class?" It is necessary then to follow up the suggestions which are thus given to the teacher, to see whether there is any improvement. Repetition of the offense after one or two more warnings should be rated a flat 0 out of the total allowed.

§3. *Towards Visitors*

A parent who calls at the school is usually a parent who is in trouble, or looking for it. In either case such a parent needs help. He may be nonplussed by the meaning of a report card. He may complain because his child has no home work. He may be filled with wrath over some imagined abuse by either teacher or pupils. He may wave a doctor's certificate in his hand and threaten

to sue the school because of punishment which his child has received. A teacher who has developed a personality towards the children has in part secured the good will of the parents. In exceptional cases, however, such good will may be put to a strain, with the resulting visit. In such an instance it is advisable to show the parent every courtesy, listen to him, and let him have his say without interruption. Tell him what he wants to know. Answer his questions quietly, even if they are not presented with deference, nor couched in friendly terms. Never start to disagree, argue, or interrupt him with a "But, etc." After he is all through, explain what is necessary, give facts, and finally, 'put it up to him' squarely with a "What do you want us to do?"

Official visitors may grace the classroom from time to time with requests of their own. The teacher need not show feeling over such visits. Information should be cheerfully given, data furnished, blanks filled out, etc.,

as the occasion demands. It is foolish for a teacher to deny any reasonable requests or to dispute over matter about which she knows little. A teacher very quickly gets a good name in the school as a worker and one who is to be relied upon, or, contrariwise, as a nuisance and general disturber of the peace. And it is by her manner of response and her helpfulness upon innumerable small occasions that her personality in this direction is developed.

Helpfulness towards visitors implies the following virtues: *(1) a response to requests, etc.; (2) reasonable promptness in satisfying demands; (3) a fair degree of completeness in what is done, and a certain adequacy in the satisfaction afforded; (4) care and accuracy in the performance, and correctness and attention to detail in the result; and (5) a manner which is agreeable and pleasing.*

Ability to listen quietly, note the essential points to be remembered or carried out,

and readiness to execute requests promptly, make for solidarity between the teacher and her superiors. One of the first things a teacher ought to learn is how to listen carefully, how to carry out instructions, and when, if need be, to take a hint. Any visitor who takes the trouble to come to a teacher's room, call her from her work, and make a request of her, does so with a purpose, and should be so respected. Whether the visitor is a heated, angry parent, or a superior official, it will not pay the teacher in the long run to show indifference, ignore requests, or interrupt, even if the language with which she is addressed carries with it a note of abuse or threat. It is far better to listen, say nothing, correct the error mentioned, note in writing what is asked for, smilingly agree, and, in general, try to straighten matters out in a calm and unruffled manner.

Ability to listen contains the following merits: *(1) quiet attention to what is said; (2) an understanding of what is required;*

(3) selection of the essentials, noting of important points, etc.; (4) following out of suggestions, and general good will; and (5) serenity and self-control.

Courtesy is necessary at all times and with every one—inferior, equal, and superior. It implies knowledge of the conventional forms of behavior and a general absence of roughness, censoriousness, raillery, contradiction, captiousness, excess of ceremony, interruption, and dispute, as Locke in his *Thoughts Concerning Education* points out. There is also implied the presence of dignity, self-control, consideration for others, and the exhibition of self-respect in the matter of general appearance, use of English, etc.

The series of excellencies to be looked for in courtesy are: *(1) proper conventional behavior; (2) respect for the opinions, feelings, beliefs, etc., of others; (3) a general attitude of docility, willingness to learn, and ability to see both sides of a question; (4)*

dignity; and (5) a use of English which befits the time, the person, and the occasion, with due regard for such conventions and formalities as exist.

Finally, as the teacher expects others to be patient with her, so she herself should show a modicum of this virtue. The essence of patience lies in waiting—in saying nothing and in doing nothing, in letting the clouds roll away of themselves, and in allowing any untoward incident to be seen in its right perspective and in the proper atmosphere. It seems fair to assume that others have a sense of decency, that others are trying to do what is right, that all the merits and all the virtues do not inhere solely in ourselves. In addition to quiet waiting, patience implies an ability carefully to analyze not only another's actions, but more particularly our own.

Patience implies that: *(1) time is given for thought, reflection, and understanding of the matter in question; (2) some effort is*

put forth, and some application and endurance shown; (3) oral expression is not hasty or ill-considered; (4) other expression which may result is fitting and proper; and (5) composure is manifest through it all.

Briefly, the excellencies contained in a fitting personality towards others are:

Personality towards visitors	100
Helpfulness	25
Ability to listen	25
Courtesy	25
Patience	25

and in detail:

Helpfulness	25
Response to requests, etc.	*5*
Promptness	*5*
Adequacy and completeness	*5*
Care and accuracy	*5*
Personal manner	*5*

Ability to listen	25
Quiet attention	5
Understanding	5
Selection of essentials	5
Following of suggestions	5
Serenity	5
Courtesy	25
Conventional behavior	5
Respect	5
Docility	5
Dignity	5
Language	5
Patience	25
Time allowed	5
Effort and endurance	5
Oral expression	5
Other expression	5
Composure	5

A teacher violates the spirit of helpfulness when she meets complaint or request with abuse or counter complaint. She commits an error when she ignores any matter which requires correction and to which her

attention has been called, either orally or in writing. She makes a grievous mistake in refusing to grant reasonable requests made from time to time, or in delaying to answer or respond when called upon. She does wrong in sticking so closely to the letter of the law that she emphasizes its violation rather than its observance. The individual who is looking for trouble, as the old adage advises, usually finds it.

Young teachers, and occasionally older ones who consider themselves above criticism and beyond stricture, may show an irritating inability to listen. 'You can't tell them anything.' Sometimes, like the Pretorian guards of old, they assume special rights and privileges; and sometimes, they imagine that perhaps wisdom will die with them. As the poet, Butler, writes,

> They keep their consciences in cases,
> As fiddlers do their crowds and bases,
> Ne'er to be used but when they're bent
> To play a fit for argument.

Their usual weapons are argument, recrimination, and abuse. A teacher who shows so little training and self-control, when approached with a reasonable request and in a respectful manner, as to become vituperative or disrespectful, deserves no further consideration than a flat 0 out of 25, and if other merits are involved, possibly 0 out of the entire 100. It is useless to prolong any discussion, once it reaches the stage of argument and recrimination. Since it takes two to make a quarrel, either side can cut short the matter by listening and saying nothing.

Lack of courtesy in more insidious form is shown by slouching posture, sneering attitude, lack of attention, etc., and should, after several warnings have been noted, receive 0 out of 25. Loose English, slovenly or dirty dress, etc., are worth about the same consideration.

Patience or its lack may be measured by (1) the length of time between action and reaction, and (2) by the effort shown on the

part of the teacher to understand and interpret what has been presented for her consideration. A teacher may be rated as deficient in patience if she continually indulges in outbursts of various kinds, fails to try out suggestions before passing public comment upon them, and neglects to consult with other teachers on the meaning of circulars or directions, or on the significance of directions about which there is some doubt.

§4. *Towards the School*

A teacher who considers her work to be bounded by the four walls of her classroom limits her personality just to that extent. As far as the school as a whole is concerned, such a teacher is of little worth. Many instances occur from time to time which call for prompt action on the part of any one within effective reach. Noise or disorder of any kind in the hall, on the stairs, or in the yard should receive prompt attention. Untoward incidents may develop into more

serious complications later, and should promptly be reported or corrected. It is implied in all this, however, that there be no interference with any one who is already in charge.

In school routine the same spirit of helpfulness can facilitate smooth, well-oiled progress. The slight requests made from time to time by teachers or superior officials should receive prompt and courteous response. In making requests of other teachers for books, supplies, etc., which are in common use among several classes, it seems reasonable to ask that these be secured before or after sessions. Interruptions in class work tend constantly to break up the continuity of the lesson, and the children who enter from time to time for one or the other thing, tend to become a nuisance. To prevent possible imposition by pupils, and to ensure an accurate delivery of any message or request, it is well to put it in writing, and have the pupil do nothing more than

deliver it. Closely allied with these matters is the usual permission given to pupils to leave the room, go to some other class to see the teacher or borrow from another pupil, and go to the yard for a drink of water, or what not. It seems a safe rule to follow never to allow a pupil to leave the room, and thereby the sight of the teacher, unless he is ill, or compelled to leave because of the demands of nature. If inkwells are to be cleaned, or notes to be sent, they can be attended to after the session is over.

In school matters, helpfulness can be shown in the following fields: *(1) records, reports, and general requests for aid or information; (2) school instruction; (3) school discipline; (4) school administration; and (5) a general forbearance and manifest tendency to tread softly in doubtful matters rather than to rush ahead.*

Cooperation to the fullest extent implies not only the acquiescence above outlined but also an active participation in the work of

the school, inside and outside of the classroom. A lack of initiative will make the teacher seem much like Tennyson's Lotos-eater to whom,

> The gushing of the wave
> Far, far away did seem to mourn and rave
> On alien shores; and if his fellow spake,
> His voice was thin, as voices from the grave;
> And deep-asleep he seem'd yet all awake,
> And music in his ears his beating heart did make.

A school is a small community in which each one is to take an active part. A teacher who is always waiting to be asked to try out some new device or method, and who has little of her own to offer, will find that she is gradually drifting into the limbo of the non-progressive and the inconsequential. In the matter of classroom exercises and school activities the same holds true. Assistance of any sort can be volunteered quietly and without ostentation. There is inherent in the right kind of initiative a uniform courtesy and consideration, and an entire free-

dom from aggressive or insolent insistence. Noise and fuss are not to be considered as signs of initiative.

Analysis of initiative will show the following aspects: *(1) promptness, readiness, and a general preparedness to meet a situation; (2) quiet methods and easy control; (3) judgment and skill in knowing when, where, and how to act, and in selecting means, details, etc.; (4) the assumption of full control and responsibility in the matter; and (5) securing of the necessary result, improvement, or correction.*

Unless the teacher is on hand each day punctually, the work of the school will suffer. Moreover, it seems like a travesty on discipline to have a late teacher instruct the children on the advantages of coming early. No teacher can so adjust herself as to come in at the last minute each day. The law of variation forbids. Continued entries in the time book which state that the teacher has entered on the stroke of the late bell may be

considered, on their face, to be false. One who aims at this last minute will hit it on most of the occasions, but sometimes one will come shortly before the bell, and a few times will be decidedly late. Suspicious entries of this sort require watching, of both clock and teacher.

A summary of excellencies in personality towards the school will yield the following:

Personality towards the school	100
Helpfulness	25
Initiative	25
Courtesy	25
Punctuality	25

A detailed analysis will give:

Helpfulness	25
Reports, requests, etc.	*5*
School instruction	*5*
School discipline	*5*
School administration	*5*
Forbearance	*5*

Initiative	25
Readiness and preparedness	5
Quiet, easy control	5
Judgment and skill	5
Responsibility	5
Result attained	5
Courtesy	25
Conventional behavior	5
Respect	5
Docility	5
Dignity	5
Language	5
Punctuality	25
Numerical measure	

A deficiency in any of the above virtues should be rated 0. Cautions are advisable for a few times before a final judgment is passed. First offences may be noted on the blanks with a question mark (?) or a cross (×). Continued violation then seems without much excuse and deserves no further leniency on the part of the principal or head teacher.

Flagrant offences against helpfulness by teachers in the school are: (1) general indifference to what is going on outside of the classroom whether or not any untoward incidents may be checked by the teacher's presence, and practically invite attention because of their proximity; (2) failure to report occurrences which may either benefit or hurt the reputation of the school; (3) interference with the work of colleagues, as by delay in filling out departmental blanks, by lack of support and cooperation with other teachers in matters of discipline, or by direct interference and quarreling with coworkers; (4) carelessness and lack of thought in sending boys to other rooms with notes, to the yard to clean inkwells, or around the building on various unnecessary and spasmodic requests, all these violations occurring while the school is in session and the children are busy at work; and (5) general interference of any kind with the work of the school.

Initiative of high type may be shown by the teacher who quietly manages her class, takes any pupils sent to her, and runs things smoothly, successfully, and without complaint. Should, however, an occasion arise, it is to be reasonably expected that the teacher, who is nearest at hand or most directly concerned, will respond properly. The teacher need not hesitate even if it seems necessary to point out possible improvement in the management of the school, provided this be done with tact and courtesy. Active interference with the work of others, however, merits scant consideration, and is well worth a zero out of the totality of merits.

Lateness of teachers can be rated on a numerical basis, the denominator being 4, 5, or 10 according to the exigencies of school control. Degrees of early entrance can be similarly arranged and a scheme of values set according as the teacher comes after a set time. If, for example, early entrance

varies between 8 o'clock and 8:40 A. M., 2 entrances after 8:30 may merit a deduction of 1 point from the total of 25 for punctuality. It is a sad commentary on human nature as it exists in some teachers to record the fact that, if the question of lateness is not looked after, not only may lateness run riot, but false entries may be made without scruple.

§5. *School Activities*

School music, singing, and exercises at general assembly are necessary in a school, and are usually taken in charge by two or three teachers, one who plays the piano, one who directs the singing and organizes special programs, and one who arranges for color-guard drill, marching of the pupils, and their general entry into the exit from the assembly hall. In addition there may be a debating club, a dramatic society, or a school band, each of which requires volunteer service, where no provision for bonus or special reward is made in the budget.

A monitor corps or school patrol is a desideratum. Pupils for such service require careful selection, drilling, instruction, and occasional meetings. Duplicated directions may be necessary to ensure effective service from the pupils. Side by side with such a corps may be organized an athletic association in which the pupils are grouped according to class, age and weight. Interclass and other meets may be held from time to time. Other forms of pupil cooperation under supervision by teachers are, a civic league, a sanitary squad, a corps to look after absentee pupils, a group to provide and prepare specimens, apparatus, etc., one to mend and cover school books, etc.

It is not enough simply to organize a committee or corps of pupils. Written or printed instructions, a constitution, or a charter tend to give the group a corporate dignity. Badges, banners, or sashes give to each member of the club an added importance. Meetings are necessary from time to

time, to hold the pupils of the group together, and to keep alive their enthusiasm. Special exercises, games, reception, class day, etc., with entertainment and refreshment are usually red-letter events for the children. When any corps has done good work its members deserve some special treat.

In organization of any activity, the following excellencies should be looked for: *(1) appropriateness and need of what is in the process of formation; (2) written plan, schedule, instructions, constitution, etc.; (3) fit insignia, banners, flags, etc.; (4) pupil aid, officers, leaders, etc.; and (5) duties outlined and made specific.* And in a meeting the following merits can be expected: *(1) need, number, etc.; (2) instruction, addresses, etc.; (3) discipline and general management; (4) exercises; and (5) refreshments, exhibition of work, presence of visitors, etc.*

Properly to check up a school activity, one must consider the following merits:

School activities	100
Organization	25
Meetings	25
Number active	25
Contribution	25

And in detail:

Organization	25
Appropriateness and need	5
Written plan, instructions, etc.	5
Insignia, banners, etc.	5
Pupil aid, officers, etc.	5
Duties outlined	5
Meetings	25
Need and number	5
Instruction, addresses, etc.	5
Discipline, management, etc.	5
Exercises	5
Refreshments, exhibition, etc.	5
Number active	25
Numerical basis	
Contribution	25
Numerical basis	

Since school activities call for volunteer service, it is impossible to insist in a participation by all the teachers. Some are neither fitted for such service nor able to give it. Teachers who do not engage in any school activities deserve no credits out of the total of 100 assigned to this aspect of personality. Teachers who are willing to expend extra energy in this work deserve not only the credits assigned, but further reward in the matter of official ratings, assignment to rooms or classes, distribution of books and material, etc. As they are doing much to help the general spirit of the school, every effort should be made to make them feel that their services are fully appreciated.

§6. *Records and Reports*

As soon as an official record or report is asked for it should be attended to, if not immediately, at least within the same day, or within the time limit set. Since many of these records are required by state or city

law, neglect of them becomes an offense of serious moment. To lay a blank aside is usually to delay it or forget about it altogether. Receipts, figures, signatures, etc., can be given at once. In the filling out of forms, spaces in books, etc., neatness, care, and accuracy can be required. Careful writing, legible figures, and ruled lines are a *sine qua non.*

Care can be shown in the following particulars: *(1) ruling; (2) penmanship; (3) figures, columns, etc.; (4) general English; and (5) cleanliness.*

Rating of teachers in the matter of records and reports is possible under the following headings:

Records and reports	100
Care	25
Promptness	25
Completeness	25
Accuracy	25

And in detail:

Care	25
Ruling	5
Writing	5
Figures	5
English	5
Cleanliness	5
Promptness	25
Numerical measure	
Completeness	25
Numerical measure	
Accuracy	25
Numerical measure	

The records which require periodical inspection are, roll books, attendance sheets, pupils' report cards, and supply books. It may be well to point out what errors to avoid when these are written up, and what mistakes to check up when they are being inspected. Roll books and pupils' report cards may not be written up on time. Sometimes

entries are not made, as of new admissions, discharges, changes in register, and daily latenesses of pupils. Occasionally complaints that a pupil has not received his monthly report card are justified. The printed or duplicated supply blank is better than the supply book. If, however, the teacher uses a supply book to note what supplies she needs each month, this should be neatly ruled, with columns for the kind of supply, the amount asked for, the amount received, and the date. The hurried, careless writing in pencil deserves nothing out of 25 in 'care.' No records or reports should ever leave the teacher's hands unless there is recorded on the outside of the paper, book, envelope, or what not, the name of the teacher, the number of the room, and the class taught, with possibly the date or the term.

§7. *The Negative Instance*

One violation of any excellence in personality or cooperation is sufficient to destroy a

host of other merits in the same field, as far as the teacher's practical value to the school is concerned. A good record for punctuality extending over a number of years can be spoiled if a teacher comes late once only, and signs early, that is, makes a false entry. Refusal to sign a receipt or to fill out a blank may seem to the teacher an incidental matter and of small account; but such a single violation is enough to mar her record for the whole school term. These are but single instances. One who is experienced in school work can recall many more like them.

A satisfactory record is a good thing. So are proper food, good air, and sufficient sleep. But the fact these have existed for a period of years is no necessary guarantee that they will continue automatically to persist. The good dinners we had last year will do us no especial good if we are hungry at present. So no teacher should presume on her past record, nor assume liberties, nor allow deficiency and weakness to creep into

her work. Contrariwise, no teacher who has not succeeded in the one term need be so discouraged as to give up all hope. Each term should be considered, in its way, a law unto itself.

It behooves a teacher, therefore, carefully to consider any negative action she may take. It is always well to acquiesce for the time, think matters over, and, if need be, talk things over with others. In logic, it is an elementary rule that negatives can not be used to prove anything. So, in social life, adverse criticism helps but little, and destructive action hinders progress. One need be marked with only the name of 'crank' or 'seeker after trouble,' and one will be considered as a nuisance, as a social block, and will be treated as such. What are wanted in this world of give and take are cheerful, helpful workers.

IV

RESULTS OF INSTRUCTION

VI

EXPRESSION

§1. *Oral Expression*

To speak or to read properly one must give due regard to (1) pause, (2) pronunciation, (3) accent, (4) stress, and (5) posture. Pronunciation as here used includes enunciation and articulation. Stress refers to proper inflection, tone, and rhythm. Proper posture implies that when he is standing, the pupil is erect, with head up, with his book about 12 inches from his eyes, and at right angle to the line of vision; that when he is sitting, he does not lean forward, does not lay the book flat on the desk, but holds it properly, either leaning it against the desk ledge, or placing it against the upturned desk, as the case may be.

Giving oral expression a value of 100, we may give as its specific merits the following:

Oral expression	100
Pause	20
Pronunciation	20
Accent	20
Stress	20
Posture	20

Errors in oral expression require constant checking up and correction. Most pupils, and in fact, most adults, read and talk too fast. They do not noticeably stop at the end of the sentence. They rush ahead whether or not the hearer is able to follow. Nice distinctions in dramatic pause are commonly neglected.

Pronunciation is violated in the following specific instances:

(1) *th,* mispronounced as *d,* or *t,* especially after prepositions, as, *to, in, on, from,* etc.; and in such words, as, *father, mother, brother, nothing, together, thing, three, third,* etc.

(2) *ing,* mispronounced variously as *en, ink, ine.*

(3) *ir, ur,* mispronounced as *oi,* in *girl, first, third, church,* etc.

(4) Baby talk, as,

d for *g* in *give, good,* etc.
t for *c* in *cat, can,* etc.
f for *th* in *thing, think,* etc.
s for *sh* in *shrimp, shroud,* etc.

(5) Dropping of the final *t* or *d* as in the expressions:

Lemme go.	*Leggo.*
Watcher say?	*I dunno.*
Shoudjer go?	*Goo bye.*
I don wanna.	*Dontcher know?*

(6) Addition of final letter, as in *saw(r), law(r),* etc.

(7) Omission of middle letter, as in *government, library, picture, Saturday,* etc.

(8) Insertion of middle letter, as in *parliament, umbrella, gymnasium, athletic,* etc.

(9) Mispronunciation of vowel sounds, as in *his, music, new, twelve,* and the like.

(10) Softening of sounds, as in *cease, baseball, acid, six, longer,* etc.

It might be well to collect and list the errors in pronunciation which are peculiar to the neighborhood and to the school.

There is often ignorance of the simple rule in phrasing, namely, that a phrase is read as a single moment up to the first qualifying word. Thus, *in the park,* is to be read with a single stress, and with a single sweep; but *in the big, white, building* calls for a pause after *big* and *white,* with added stress for each of these words. Most children fail to pause after qualifying words and to give proper stress to phrase groups.

In the testing of a class, five of the best readers may be called upon each to read a sentence or two from a lesson which they have already had. Each one can rapidly be checked up on the five merits enumerated above. Should these pupils fail in one or more of the qualities inherent in good reading, it is safe to assume similar deficiencies in the rest of the class. Two or three medium pupils may be called upon and marked.

With a very simple selection, five of the poorest readers might be tried and rated

§2. *Appreciation—Study of the Text-Book*

Appreciation deals with the content of the lesson, with the reading matter, as such. It implies ability to understand and give the meaning of the lesson, tell the story briefly, note the chief points in the discussion, and illustrate the significance of what has been read. The subject to be considered may be the usual reading lesson, or it may be a memory selection, a passage in history or geography, or it may even include a problem in arithmetic.

Further study will call for explanation of allusions which occur, for a knowledge of the author, similar selections, etc., and for a description of the background in which the action takes place, or the description is set. Appreciation should lead to further study, and this is encouraged when the pupil knows where to go for similar selections, and what other works the author wrote.

More detailed analysis demands topical study of the lesson. The pupils should be able to go through a piece or paragraph, pick out the topic or the topic sentence of each paragraph, and arrange them in outline form. Then they should amplify the outline which they have constructed, using words and expressions of their own in the process. One is reminded of what Franklin did with the Spectator. "I took some of the papers," writes he, "and, making short hints of the sentiment in each sentence, laid them by a few days, and then, without looking at the book, tried to complete the papers again, by expressing each hinted sentiment at length, and as fully as it had been expressed before, in any suitable words that should come to hand. Then I compared my 'Spectator' with the original, discovered some of my faults, and corrected them."

The structure and the style of the selection may be studied, but without any attempt at formal definition or naming. Pupils can

be then required to show how one paragraph leads to the other, how the transitions are made, how each paragraph is guided by the general theme or subject, and how the same idea is expressed and amplified by the various expressions. Sequence and organization become a part of the study.

Finally, word study for meaning, style, (clearness, force, elegance), and grammatical arrangement completes a thorough appreciation. Formal definition should be avoided in this, and no attempt need be made to use rhetorical terminology. The pupil should be able to substitute words for those in the lesson, and should give, if possible, different words which are used to express the same idea, words based on the same stems, opposites, plural expressions, and so on.

In summary, the merits in a complete appreciation and study of text are the following:

Appreciation and study of text-book	100
General meaning and story	20
Background, allusions, etc.	20
Topical study, outline, etc.	20
Sequence and organization	20
Word study, etc.	20

That children do not know how to use the text-book is a common complaint. They may try to study a lesson verbatim, word for word, without attempting to get the meaning of the whole before beginning detailed study. They may be unable to take a number of paragraphs, and without prompting by the teacher, to express the thought in each paragraph by means of a topic or sentence. At times it may be found that the class is unfamiliar with the whole work from which a selection is taken. For the children simply to 'tell what they have read or studied,' is only a part of the entire result which is to be attained.

§3. *Manual Expression*

In a narrow and technical sense, manual work refers to such activities as, drawing, modeling, weaving, sewing, cooking, shop work, and the like. Written work in composition and dictation, penmanship, etc., are also manual expression in part, and are subject to the same standards. Written work, however, has a content peculiarly its own, and on this account requires separate treatment as given below (page 158).

After the pupils have finished using the material, and have produced a definite object, a proper setting is usually in evidence. This setting may consist of margination, mounting, covering, boxing, etc., according as the results are obtained in drawing, modeling, sewing, cooking, shop work, etc. The same general excellence is to be looked for in all, the variation depending upon the kind of material used. The work as such can not be considered as finished until it has received its proper background or setting.

Good results will show proper spacing, arrangement, and proportion of parts. Colors should be in harmony, the material should be adequate, and the size of the object and the amount of material used should be commensurate with the purpose in view. For example, to teach a class how to make strawberry shortcake, it is not necessary to feed each pupil and half of the teaching corps with strawberry shortcake. Nor in shopwork, is it necessary to use the work of the pupils to supply the neighborhood with cutting boards or stools. In such cases the amount of material is not commensurate with the purpose of the work. The general form of the objects made by the pupils should be neat and pleasing to the eye.

Work done by the pupils should be ticketed or labeled. On one side of the tag the pupil should write his name, class, and school; on the other side he might indicate the date when the work was finished, the date when it was begun, the time taken to

complete it, and possibly, the amount and cost of the material needed.

Sequence and organization in the production of the results are merits worthy of attention. Has the task been planned so as to secure results economically and expeditiously? Has the work any meaning to the children? Is it a barren, scholastic exercise, or does it apply in some manner to the lives of the pupils? Do they know what it is all about? For example, is the patch made in the sewing lesson a patch *in abstracto,* or is it one in a pair of pantaloons or in a real jacket? Is the cooking such as the children should do at home, or is it concerned with pastry and tidbits? Has the drawing, color work, design, or shop work any relation to outside industries, or to other school subjects, as, geography, nature study, science, or arithmetic? Do the problems in weaving, modeling, scissor work, etc., connect in any manner with the children's practical experience, and with the language or number work

of the school? Finally, have the different objects produced by the children any relation to one another? Can they all be included in a unity of meaning? Is the term's work a correlated whole, in which each part and each product follow, one out of the other?

Neatness, cleanliness, and a general trim appearance inhere in the best work. Spots, stains, finger marks, rough edges, lack of finish, etc., are to be counted against the work in this particular.

In summary, the excellencies to be looked for in manual work are as follows:

Manual expression	100
General setting	20
Proportion, harmony, etc.	20
Name, date, etc.	20
Sequence and organization	20
Neatness and cleanliness	20

It is still too common to find teachers of special subjects averse to supervision, and to criticism and suggestion from the head of

the school. There may exist a vague idea that the head of the school is better qualified to look after the three *R's,* and that these essentially limit his domain in the matter of instruction. If a principal or head of a school is responsible for everything that goes on within it, and for the results which are to be obtained, it seems reasonable to assume that he should have standards and measures for the different activities which are going on. He should not hesitate to check up and rate all the work, whether this is manual, special, or other kind.

A fault which can be charged against much of the manual work is its splendid isolation. It moves grandly onwards, and is apparently indifferent to the surging activities outside of the school, and the buzzing interests within it. It seems not too much to ask, for example, that the kindergarten manual expression lead up to the content number work and the oral expression of the first school year; that drawing

be correlated closely with geography, industrial exercises, and science; that sewing and cooking make a considerable appeal to the home interests and occupations of the children; that, in short, special subjects weave their exercises and their results into the experiences of the pupils, and connect as much as possible with the grade work. Where this is not found, the deficiency is to be checked up under the heading of sequence and organization.

A numerical basis can be used in rating the results under the other headings. Each pupil can be held responsible for proper setting, proportion, etc., as explained above. With the register of the class or the attendance as the denominator, the different excellencies in the manual work can be counted up and rated.

§4. *Motor Expression*

When a dramatization, a drill, or a dance has been prepared, specific excellencies are to be kept in mind in judging of the work. How is the grouping? Are the children massed properly? Are there centers of interest, adequate contrasts, and unified arrangement? In their actions, do the children move naturally, gracefully, and quietly? Are these actions a part of the story or of the feeling they are supposed to represent? Do the individuals in the group move promptly on time, and in proper rhythm? Is there good response to music, cue, preceding speaker, or leader? Is it necessary for the teacher to direct and be in evidence, or does the action go along of itself, under full control of the children themselves? Finally, are the postures easy and natural, and in harmony with the meaning of the presentation?

Giving motor expression 100 credits, each of the following aspects may be valued at 20:

Motor expression	100
Grouping	20
Actions	20
Time, rhythm	20
Response	20
Posture	20

Dramatization and dancing are infants in the general school family of subjects, and must be handled with care. One may see them so seldom that one fears to arrest such activities by giving criticisms and directions. To comment upon their excellence or lack of excellence seems much like looking a gift horse in the mouth, especially where extra time, labor, and expense have been necessary. Still, faults are faults in the most commendable of endeavors, and must be indicated if they are present—though this should be done slowly and gently.

In dancing, drills, etc., a common deficiency is an indifference to time and rhythm. The children do not keep step, nor

do they keep time with the music. Considerable practice is often necessary to secure good rhythm, and often the children must be selected for the attainment of the best results. Many pretty effects are often spoiled by this weakness.

Sometimes, in dramatization, dancing, or drill work, the grouping is not managed as well as it might be. The children often straggle, break formations, interfere with one another, and do not keep a unit formation. This may be due to either a lack of discipline and control, or to lack of sufficient drilling. Proper grouping sometimes constitutes the essence of the meaning which the motor expression is intended to convey.

While the children are presenting their work, the teacher should not be in evidence. It spoils the general effect if the teacher hovers around, steps in to direct, or enters the 'unity of place' in which the action takes place. The responses of the pupils should be automatic, or directed by the cues of the

preceding speakers, or by one of their own number.

§5. *Written Expression*

Written work can be judged under two general headings, (1) form, and (2) content. In most cases it refers particularly to work in composition and dictation.

As regards the form of the written work which is examined, one can reasonably expect that proper margins are kept, one on each side of the paper; that the body of the written matter is spaced from above and below, and not pushed up close to the top; that the name and date are written in a set place on the paper, each paper being the same in this particular; that both topics and subtopics are at the top of the paper under the title or heading; and finally, that the work is clean, without blots, blurs, or dirt marks.

Arranged in serial order these excellencies are:

Written work—Form	100
Margin, ruling	20
Spacing, arrangement	20
Name, date	20
Title, heading	20
Blurs, blots	20

In the checking up of the form of written work, several inaccuracies will usually be found. No margins may be kept, or there may be conspicuous ruling in pencil to help the pupil keep a margin. Such ruling is to be counted as error. A good test for margination, is to distribute paper without ruling of any kind, and have the children write a sentence or two. The names and dates on the written papers, unless the pupils have been properly instructed, will be carelessly written, and written differently as regards placing and arrangement on the papers. Dirty papers, or papers in which the writing is marked with blots or blurs, can readily be counted.

One may take either the median paper for such examination and rate it on the values suggested, or five of the best papers, and five of the worst. While it may take more time, however, to correct each paper in the pack, and count up the errors on each paper, it is well worth the trouble in the improvement which results. Succeeding correction will involve less labor and will find fewer inaccuracies, these being chiefly confined to the blots and blurs which seem to persist where ink is used.

On the side of content, written work can be rated for its spelling, punctuation, paragraphs, sequence and organization, and grammar, (misuse of 'and'). In spelling and punctuation, each paper may be counted as wrong, if it contains one or two errors. Paragraphs and paragraph structure are considered as deficient if any paper has more or less paragraphs than the number which the outline of topics calls for, or if the paragraph form is violated. Sequence and

organization imply that the matter of the composition has some relation to the children's experience, studies, or interests, and that the composition reads smoothly from paragraph to paragraph. Gross error in grammar, or the abuse of 'and' in a composition counts as failure.

In summary, the values of the content of written work are:

Written work—Content	100
Spelling	20
Punctuation	20
Paragraphs	20
Sequence and organization	20
'And,' Grammar	20

Where there has been a lack of preliminary oral work and topical development, it is usual to find a number of compositions wrong in the number of paragraphs, with a corresponding looseness in the general structure. The cover sheet of the pack may bravely show three topics for paragraphs.

Count of the compositions may yield only a small number which have three paragraphs, the rest varying from one paragraph to six or seven. Again there may be found the dictated composition, in which there is such a suspicious similarity in expressions, introductions, etc., throughout the work, that one suspects that much of the composition has been remembered by the pupils, or copied from the board. It is a very easy matter to detect this by counting the number of papers which use the same predominating expressions.

In mostly all written work the 'and' habit is one most difficult to suppress. Composition after composition in a set will show 'and, etc.,' where the structure calls for a period, new sentence, and capital letter. One or two violations of this kind can be considered enough to count the paper out.

While the form and content of written work call for eight merits, the errors which require most attention are blurs and blots,

spelling, punctuation, and 'and' or grammar. Once a teacher understands what excellencies are looked for, and which of them is to be specially guarded against, the work of correction can be done very rapidly. In the beginning, the work of correcting compositions is somewhat laborious, but it soon becomes easier. A teacher can be expected to look over a set each month. It is sufficient if the principal goes through a set for each class once a term. If the median composition is selected for correction, this can take place each week.

In written work and in manual expression, each paper or object is counted as a unit in each of the values checked. For example, in the correction of a set of compositions, errors in margins, spacing, etc., are rapidly scored, an arbitrary marking, as, line, cross, check, circle, shaky line, etc., being used for each of the errors. These errors are then counted, each paper counting one. The results will then appear some-

thing like the following: margins and ruling, papers wrong 6; spacing and arrangement, 2; name and date, 5; title and heading, 8; blurs and blots, 17. If the total number of papers in the set is 34, each incorrect paper will count 0.5882 out of the total of 20. (See table, page 33). The ratings which result will then be as follows: margins and ruling, 20 — 3.12 = 16.88; spacing and arrangement, 20 — 1.17 = 18.83; name and date, 20 — 2.94 = 17.06; title and heading, 20 — 4.70 = 15.30; and blots and blurs, 20 — 10 = 10; total, 78.07. A similar numerical valuation can be given for the content of written expression, and for the different excellencies enumerated under the heading of manual expression.

VII
ARITHMETIC

§1. *Addition*

For testing in simple formal addition, arrange a series of figures as follows:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
111	112	113	114	115	116	117	118	119	120

Etc., etc., etc.

Have the pupils add to each one, 1, 2, 3, etc., within the limits of the grade requirements. Then use as addends, 11, 12, 13, etc., 111, 112, 113, etc., and on through figures of four or five places. In this way it will be possible to find out what ability the pupils possess in reading numbers, writing them, and in continuous, simple addition.

The following graduation of difficulties is good to test a class and to discover at what point in the series the pupils break:

(1) No carrying

1	12	113	1114	1115
+3	+13	+13	+123	+2113

(2) Carrying in only one place

1	11	111	1111	1111
+9	+9	+19	+19	+91

(3) Carrying in only two places

91	91	191	191	111
+9	+19	+9	+ 19	+99

(4) Position of the 0

10	120	101	101	1001
+4	+4	+14	+9	+191

A selection of examples from these graded examples will enable one to place one's finger on the place at which the pupils become confused in the problem of carrying. Other combinations, like, 7 + 4, 8 + 4, etc., can be graded in the same manner. A selection of types to test the class in 'carrying' would

be one like the following: 1 + 9, 11 + 9, 111 + 19, 91 + 9, 191 + 9, 191 + 19, etc.

Testing of a more advanced type will include single and double column addition like the following:

1	9	19	19	119
2	8	18	28	128
3	7	17	37	137
4	6	16	46	146
5	5	15	55	155

Whenever it is possible, it is well to grade the difficulties, adding only a single new element at each step.

A good time test is to assign 50 examples in addition with a time allowance of 15 minutes. The examples are all of five addends, of two places, and are on printed or duplicated sheets. All that the pupils have to do is to add the columns and write the answers under the printed examples. In correcting the papers, the teacher counts (1) the number done, and (2) the number correct. A

test like this can be given uniformly through the school, on the same day and at the same time. It can also be given at the beginning of each month. When the results are tabulated, they can be so arranged as to show: (1) average number done correctly for each grade; (2) average number done correctly for each age; (3) variation and variation percent for grade and age; and (4) the effects of practice, season, etc.

In problem work, the chief difficulty for the children is in understanding the English used, and in interpreting correctly the expressions which indicate that addition or some other arithmetical process is to be performed. Problems in addition will make use of terms like: *add, plus, more, get, gain, sum of, had, made, found, saved,* etc. Two general forms may be used, one, a very simple form, as, *Had 3c and made 2c more. How much have I?* and the other a more complex form, as, *If a man makes $3 and increases this by $1, how much has he then?* and, *Mr.*

Smith has $3, and his brother has $1 more. How much have they both? Simple number analysis may be required, as, *What numbers added will give 10?*

Reconstruction work by the pupils requires greater effort and calls for a more accurate knowledge of the work. In calling upon the pupils to construct problems of their own on a topic, it is advisable to circumscribe the situation and define the limits set. The materials may be taken from the following:

(1) The home *(a) Things*
(b) People
(c) What is done

(2) The neighborhood
(a) Work and industries
(b) People
(c) Things

(3) The school *(a) Work and exercises*
(b) People
(c) Things

(4) The classroom, as above

(5) Correlated subjects, as, geography, (areas, products, population, exports, imports, duties, etc.), nature study, word study, etc.

(6) Pictures and the things in them

(7) Plays and games

(8) Specific material, as, pads used per pupil, supplies each month, cost, etc.

In such problem work, the situation may be given in general or it may be specifically determined. Several variations are possible, as:

(1) Make up five problems connected with the work outside of school.

(2) Think of some store or business in the neighborhood. What material do the people use? What amounts? Costs? Make up five problems about them.

(3) John is a grocer, and sells coffee, tea, sugar, butter, eggs, canned goods, etc. On Saturday, he does a rushing business. Make up five or ten examples such as he will have to do in making up his

bills, counting his sales, or reckoning his profits.

(4) Make up five problems on the style of the following: A butcher sold, etc. Keep to the butcher shop and what the butcher does in his shop.

§2. Subtraction

A series similar to that used in addition can be employed in trying out the pupils in subtraction, thus:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
111	112	113	114	115	116	117	118	119	120

Etc., etc.

Pupils should be required to subtract 1 from each of the above, then 11, 111, etc. The same process can be carried with other figures, as, 12, 22, 13, 23, 33, 112, 122, etc.

Weakness in borrowing can be detected by the use of examples of the following degrees of difficulty:

(1) No borrowing

9	19	29	129	129
–1	–1	–11	–1	–11

(2) Borrowing in only one place

21	121	121	212	212
–9	–9	–19	–91	–191

(3) Borrowing in only two places

231	331	1331	1331	4331
–49	–149	–419	–491	–1491

(4) Position of the 0

20	10	20	20	102
–10	–4	–4	–14	–4

Sets of 4 or 5 examples of the same degree of difficulty may be given, and each stage of difficulty tried out in this manner. Or a series of examples increasing in difficulty from no borrowing through borrowing in two or three places may be given.

Problems in subtraction involve the equivalents in language for the – sign. Such

expressions are, *subtract, take away, minus, difference, lost, gave away, spent, less than, left ?, change received ? missing ?,* etc. Several examples of the same form but with different expressions for subtraction may be given to the pupils, to test their understanding of the terms used. The form may be a simple one, as, *Take 3 apples from 34 apples. How many left?* or, *Give the difference between 43 and 13;* or it may be somewhat more complex, as, *If you have $18 and spend $3, how much will you have left?* or, *How much older is Mary than John, if Mary is 18 years old, and John is 3 years old?* Reconstructive exercises may also be required of the pupils as in the case of addition. Situations are outlined in much the same way and the children are asked to make up five or ten problems with the material given. (See page 169).

By combining addition and subtraction one can construct problems which involve two processes. Simpler problems would run

something like the following: *If you spend 3c and give away 2c, how much will you have left if you first had 10c.* A more complex type would be: *John has 15 marbles, and his brother has 6 less than he. How many have both?* It is possible to lead up to the final problem, step by step, and find out where pupils fail, thus: *(1) John has 15 marbles and his brother has 9. How many have the two boys? (2) John has 15 marbles, and his brother 5 less. How many has his brother? (3) John has 15 marbles and his brother has 7 less. How many have the two?* A similar series is the following: *(1) Gave away 8c. How much left out of 20c? (2) Spent 5c out of a total of 20c. How much left? (3) Spent 5c and gave away 4c. What was the total? (4) Spent 5c and gave away 1c. How much left out of a total of 18c?* Problems like the above need not be given in order of difficulty, but might be effectively mixed with other problems and examples.

§3. *Multiplication*

The simplest test in multiplication is work in the multiplication tables, as such, without added difficulties, as carrying, or problem work. It is advisable to try the pupils rapidly on a multiplication of all numbers from 1 through 12 by all numbers from 0 through 12, within the limits of the grade requirements. Keeping to the tables, one can give graded work as follows:

(1) No carrying

(2) Carrying in one place only

11 12 13 14 15 16 17 18 19, etc.

Multiplication by numbers from 1 through 9

(3) Carrying in two places only

122 133 144 155 166 177 188 199, etc., and

221 331 441 551 661 771 881 991, etc.

Multiplication by numbers from 1 through 9

(4) Carrying in three or more places, and multiplication by 10, 11 and 12.

After the pupils have been tested in multiplication which involves simple use of

the tables, more advanced multiplication may be required in the following stages of difficulty:

(1) No carrying
111 122 123 213 312, etc., multiplied by numbers like 11, 12, 21, 22, 23, 31, 32, 33, etc.

(2) Carrying in only one place
111 122 123 213 312, etc., multiplied by numbers like 61, 71, 62, 72, etc., and 16, 17, 26, 27, etc.

(3) Carrying in two or more places

In problems which call multiplication into use there are several types which may be used. One involves the use of determinate units, as, *feet in – yards; quarts in – gallons; quarts in – pecks,* etc. A second type employs indeterminate units, as, *Pieces of soap in – boxes, each of which holds – pieces; Seats in – rooms, if each room has – seats; Books on – shelves, if each shelf holds – books,* etc. A third kind of problem is the usual: *Cost of – –, at – a piece,* etc. A fourth possibility is the simple area and surface problem, *Area*

of a room 15 feet square? or, *Area of a yard 25 feet by 40 feet?*

The four types enumerated above require but a single process, one of multiplication. A combination of these types will yield problems which necessitate two or more processes. Thus we may have the following: *Cost of 3 dozen pens at 2c a pen? Value of 5 gallons of milk at 4c a pint? Weight of 8 boxes of canned tomatoes, each box holding 144 cans, if each can weighs 2 pounds?* Each of the difficulties in a more complex type can be brought out in a single example, thus:

(1) Weight of 144 cases if each weighs 288 pounds each?

(2) How many cans of tomatoes in 8 boxes, if each box holds 144 cans?

(3) How much will 1100 cans weigh at 2 pounds a can?

(4) How much will a box of 144 cans weigh, if each can weighs 2 pounds?

(5) Weight of 8 boxes of canned tomatoes if each box holds 144 cans, and each can weighs 2 pounds.

Another series is the following:

(1) How many things in 35 dozen?
(2) Cost of 200 pens at 2c a pen?
(3) Cost of 35 dozen pens at 2c a pen?

These problems may be given in graded series, or they may be presented at random, or mixed up with other examples. They will enable one to check up the pupils on the difficulties involved in the final, complex type.

Pupils should be required to make up problems as in the case of addition and subtraction and with similar material (page 169). If the pupils have been encouraged to collect circulars, advertisements, bids, etc., there should be a plentiful supply of material at hand. Tests based on such material will require the pupils to construct five or ten problems which deal with bills such as are made out in the stores, with expenses such as are incurred in the shop, the home, etc., with cost of school supplies, etc., and with area, space, etc.

Addition and subtraction may be combined with multiplication to form problems of further difficulty. Two, three, or four processes may be necessary. Several types may be given, as:

(1) *Bought – pounds of candy at 6c a pound, and sold it for 10c a pound. Gain on the candy?*

(2) *Bought – gallons of vinegar at 8c a quart. If – gallons leaked out, and I sold the rest at 15 a quart, gain or loss and how much?*

(3) *Bought – gallons of milk at 15c a gallon, and sold it at 9c a quart. Gain or loss and how much?*

(4) *A gang of 20 men work for a week at $2 a day. Then 10 more men come, and they all work for 2 weeks. What will the total wages be for the 3 weeks?*

§4. *Division*

Graded tests in division will proceed according to the following series:

(1) Short division with no remainders
$77 \div 7$, $88 \div 8$, etc., $147 \div 7$, $168 \div 8$, etc., $714 \div 7$, etc., etc.

(2) Same as (1) but with remainders

(3) Long division with no remainders
$21 \div 21$, $63 \div 21$, $231 \div 21$, $168 \div 21$, etc., etc.

(4) Same as (3) but with remainders

Exactly where the pupils find difficulty, whether in trial divisor, remainder, carrying the cipher, etc., can be discovered by giving a series of examples which are graduated in difficulty.

Problems in division fall into two or three types: (1) sharing or partition, as, *Share – – evenly among 23 boys,* or, *If 36 pens cost –, what is the cost of 1 pen?* (2) measuring or division, as, *How many 5c books can you get for $ – ?* or, *How many 6 inch pieces of ribbon can you cut out of – inches of ribbon?* and, (3) analysis and missing part problems, in which the process of multiplication is reversed, as, $8 \times ? = 360$, *An area*

of – square feet measures 15 feet on one side. How long is the other side? Any of the examples in multiplication can be converted to problems in division by changing the parts, making the answer one of the given parts, and one of the given parts, the answer to be found. By making use of the material suggested above, (page 169), pupils may construct problems of their own, with division the chief process.

Division calls into play all the processes, addition, subtraction, and multiplication, besides division itself. It also makes use of selective judgment in trial divisor, and is the best of the four processes to test pupils formally. All the grades in the school may be given a 15 minute test in short division, with examples of the type, 7)34291. Fifty such examples on printed or duplicated sheets are given to the children, a time allowance of 15 minutes is set, and the pupils are asked to write the answers on the sheets given. If the test is given on the same day

and the same time, averages, variations, and variation percents can be calculated for each grade, each age, and if need be, each nationality under the two headings, grade and age. Such tests may be given at the beginning of each month to test progress and habit formation. It will be found that the division test correlates most closely with general ability in arithmetic, than do most of the other formal tests.

§5. *Fractions*

Reduction of fractions can be tested in short division with remainder, as, $39 \div 9$, and in the addition and subtraction of fractions. Examination of pupils in the addition and subtraction of fractions can be carried on in work of the following degrees of difficulty:

(1) Identicals, no reduction nor borrowing

$^{2}/_{4}$	$^{5}/_{8}$	$1^{4}/_{6}$	$3^{5}/_{9}$
$\pm{}^{1}/_{4}$	$\pm{}^{2}/_{8}$	$\pm{}^{1}/_{6}$	$\pm 1^{2}/_{9}$

(2) Factors, no reduction nor borrowing

$\frac{1}{2}$	$\frac{5}{8}$	$1\frac{1}{2}$	$3\frac{5}{9}$
$\pm\frac{1}{4}$	$\pm\frac{1}{4}$	$\pm\frac{1}{4}$	$\pm 2\frac{1}{8}$

(3) Primes, no reduction nor borrowing

$\frac{1}{2}$	$\frac{1}{4}$	$1\frac{1}{8}$	$3\frac{3}{5}$
$\pm\frac{1}{3}$	$\pm\frac{1}{5}$	$\pm\frac{1}{4}$	$\pm 2\frac{1}{3}$

(4) Identicals, with reduction or borrowing

$1\frac{1}{4}$	$1\frac{3}{8}$	$3\frac{1}{6}$	$5\frac{4}{9}$
$\pm\frac{3}{4}$	$\pm\frac{7}{8}$	$\pm 1\frac{5}{6}$	$\pm 3\frac{7}{9}$

(5) Factors, with reduction or borrowing

$1\frac{1}{4}$	$1\frac{1}{4}$	$4\frac{1}{4}$	$5\frac{2}{3}$
$\pm\frac{1}{2}$	$\pm\frac{5}{8}$	$\pm 1\frac{1}{2}$	$\pm 3\frac{7}{9}$

(6) Primes, with reduction or borrowing

$1\frac{1}{3}$	$2\frac{1}{5}$	$6\frac{1}{2}$	$5\frac{1}{2}$
$\pm\frac{1}{2}$	$\pm\frac{3}{4}$	$\pm 2\frac{2}{3}$	$\pm 2\frac{4}{5}$

Pupils may be tested in several examples of the same type, or in a series of several examples taken from types (1), (2), etc.

Cancellation and examples in multiplication which involve fractions can be graded as follows:

(1) Parts of a whole number
½ of 12, ⅓ of 12, ¼ of 144, ⅔ of 12, etc.
(2) Multiplication by a mixed number.
$12 \times 1\frac{1}{2}$, $12 \times 3\frac{1}{3}$, $144 \times 1\frac{1}{4}$, $36 \times 2\frac{1}{2}$, etc.
(3) Parts of a fraction, mixed number, and cancellation.
½ of ⅖, ⅓ of ¾, ½ of ⅓, ⅓ of $1\frac{1}{2}$, $\frac{1}{2} \times \frac{1}{3} \times \frac{3}{4} \times 1\frac{1}{5}$, etc.

Gradation in division by fractions gives the following types:

(1) Division of a whole number by a fraction, as, 2, 3, 4, etc., divided by ½, ⅓, ¼, etc., and then by ⅔, ¾, ⅘, etc.
(2) Division of a fraction by a whole number, (1) reversed.
(3) Division of a fraction by a fraction, as, $\frac{1}{2} \div \frac{1}{3}$, $\frac{1}{3} \div \frac{1}{2}$, $\frac{3}{4} \div \frac{2}{3}$, etc.
(4) Use of mixed numbers, as, $1\frac{1}{2} \div 2$, etc., $2 \div 1\frac{1}{2}$, etc., $\frac{1}{2} \div 1\frac{1}{2}$, etc., $1\frac{1}{3} \div 1\frac{1}{2}$, etc., and $1\frac{1}{2} \div 1\frac{1}{3}$, etc.

(5) More complicated forms which combine addition, subtraction, multiplication, and division.

A few simple questions like the following will quickly enable one to get a general idea of what a class knows in fractions: $\frac{1}{2} + \frac{1}{3}$, $\frac{1}{3} + \frac{1}{2}$, $\frac{1}{2} - \frac{1}{3}$, $\frac{1}{2} \div \frac{1}{3}$, $\frac{1}{3} \div \frac{1}{2}$, $\frac{1}{2} \times \frac{1}{3}$, etc.

Problems which involve manipulation of fractions are much the same as the problems suggested for work in addition, subtraction, multiplication, and division. It might be well to give these problems first with whole numbers, and then with the addition of fractional parts to one, two, or three elements of the problem. A series like the following will result:

(1) Cost of 2 dozen pens at 3c a pen?
(2) Cost of $2\frac{1}{2}$ dozen pens at 3c a pen?
(3) Cost of 2 dozen pens at $3\frac{1}{2}$c a pen?
(4) Cost of $2\frac{1}{2}$ dozen pens at $3\frac{1}{2}$c a pen?

For other types see the work outlined above (pages 168, 173, 174, 176, 177, 179, 180). Reconstructive work in fractions will follow similar lines (See pages 169, 170).

§6. *Decimals*

For a test on the ability of the pupils to read and write decimals, the following series may be used: 1. .1 .001 10 .01 .0001 1.01 10.1 etc. Pupils may be required to read them, write them at dictation, or arrange them for addition or subtraction.

For multiplication the work may be graded as follows:

(1) Multiplication by a whole number, as, $.31 \times 2$, $.313 \times 3$, $.34 \times 4$, $.313 \times 40$, etc.

(2) Multiplication by a decimal, as, $.31 \times .2$, $.313 \times .22$, etc.

(3) Use of mixed numbers, as, $3.13 \times .2$, $3.13 + .6$, $3.13 \times .22$, 3.13×4.4, etc.

Graduation of the work in division will yield the following series:

(1) Division by a whole number, as, $.66 \div 2$, $.66 \div 5$, $.06 \div 2$, $.06 \div 5$, etc.

(2) Division by a decimal, as, $.66 \div .2$, $.66 \div .5$, $.06 \div .2$, $.06 \div .02$, etc.

(3) Use of mixed numbers, as, $6.6 \div 2$, $6.6 \div .2$, $6.6 \div 2.2$, $6.6 \div .22$, etc.

A combination example which will test ability to handle decimals is the following: *Divide 360 by 12, by 1.2, by 120, and by .12, and add the results.* A more complex example along the same lines is: *$360 \div 1.2$, $3.6 \div 120$, $360 \div .12$, $36 \div 1200$. Add the results.* If it is necessary to find out exactly where pupils have any difficulty, a graded series is better. The series may use the same numbers all through, the only variations being in the position of the decimal point, as: $4 \div 2$, $4 \div .2$, $4 \div 20$, $.4 \div 2$, $.4 \div 20$, $.4 \div .2$, $.4 \div .02$, etc. Problems will follow the same types as those given in the work of simple numbers (pages 168-180) and fractions (pages 185, 186). Reconstructive exercises will be similarly conditioned (pages

169, 170). Examples which involve dollars and cents require a knowledge of decimals and the use of the decimal point.

§7. *Compound Numbers*

The use of simple denominate units is implied in work which applies multiplication and division (pages 177-181). The *inch – foot, foot – yard, pint – quart, quart – gallon, quart – peck, day – week, cent – nickel, cent – dime, dime – dollar, thing – dozen,* etc., may be used in examples which call for multiplication or division by 2, 3, 4, 5, 7, 8, 10 and 12. If pupils fail in such simple work it may be necessary to test them in their denominate measures.

All work in compound numbers falls into two general divisions: (1) reduction descending, and (2) reduction ascending. Graded examples in these two divisions will go somewhat as follows:

(1) Reduction descending

(a) Two steps, as, *quarts to pints, gallons to quarts, quarts and pints to pints, gallons and quarts to quarts,* and similarly with the other measures

(b) Three steps, as, *gallons to pints,* etc., *gallons and quarts to pints,* etc., *gallons, quarts, and pints, to pints,* etc.

(c) Subtraction, as, *pints from quarts, quarts from gallons,* etc.

(d) Division, as, *sharing gallons among individuals, gallons and quarts, gallons, quarts, and pints,* etc.

(2) Reduction ascending

(a) Two steps, as, *pints to quarts, quarts to gallons, pints to quarts and pints, quarts to quarts and gallons,* etc.

(b) Three steps, as, *inches, to inches, feet, and yards, quarts to bushels, pecks, and quarts,* etc.

(c) Addition and multiplication, two orders, three orders, etc.

Practical work in compound numbers assumes the following forms:

(1) Cost problems which involve either reduction ascending or descending, as, *Cost of – bushels, etc., at 5 cents a quart, or 1.20 a bushel? Cost of – quart, etc., at 25c a gallon?*

(2) Problems in the four rules, addition, subtraction, multiplication, and division, as, additions, leakage, loss, sharing, etc.

(3) Fractional or decimal parts of denominate units

(4) Areas, contents, etc.

If the pupils fail in any problem, it can be given to them in a number of simpler forms, thus:

(1) Cost of 53 pints of milk at 5c a pint?

(2) How many pints in 23 quarts and 1 pint?

(3) How many pints in 6 gallons, 2 quarts, and 1 pint?

(4) Cost of 6 gallons, 2 quarts, 1 pint of milk at 5c a pint?

These steps may be given in the order (4) through (1), or (1) through (4), or they may be presented at random and mixed with other problems in the test. Reconstructive exercises may be required as suggested above (pages 169, 170).

§8. *Percentage*

Knowledge of percentage, as such, is tested in much the same manner as is knowledge of decimals. A series of examples like the following may be given: 2×12, $.02 \times 12$, 2% of 12, ½ of 12, ½% of 12, 2½% of 12, etc. In the more advanced stages of the work, examples may be mixed like the following: 2% of 36, 20% of 36, ½% of 36, 50% of 36, 5% of 36, Difference between 2% of 36 and ½% of 36? Between ½% of 36, and 50% of 36?

Problems in percentage involve the use of different expressions for the base on which the percentage is reckoned, as, *cost, proceeds, sales, list price, face, principal, real*

estate, personal property, policy, etc., and the employment of the corresponding terms which indicate the percentage, as, *profit, loss, commission, allowance, rebate, rate, discount, interest, tax, assessment, levy, fee, premium, specific duty, ad valorum,* etc. If one wishes to find out whether the pupils understand the significance of the terms, one can give problems in which the numbers are the same, but the expression different. Such problems can be given at random and mixed with other work. Interest may be graded somewhat as follows:

Principal	Time	Rate
$36	1 year	2%
$36	1 yr. 6 months	2%
$36	1 yr. 6 mos. 15 days	2%
$36	From Feb. 6, 1912, to date	

Required, Interest and amount

Reconstructive exercises are also in order (See pages 169, 170).

§9. *Indirect Cases.*

The type form, *What part of – is – ?* may be graded as follows: (1) Use of whole numbers in the given elements, as, *What part of 36 is 12?* (2) Use of fractions or mixed numbers in one or both of the given elements, as, *What part of 4 is* $1\frac{1}{2}$*? What part of* $\frac{2}{3}$ *is* $\frac{1}{2}$*?* (3) Use of denominate units in the given elements, as, *What part of 3 quarts are 5 pints?* (4) Use of decimals in the given elements, as, *What part of 3.6 is .012?* Combination of decimals and fractions, as, *What part of 3.6 is* $\frac{3}{4}$*?* Three variations are possible in the requirements of each of the series. Either the fractional part, the decimal part, or the percent may be asked for in the answer.

Indirect cases of the equation type vary from examples which can be done at sight, to those which require two or three processes to solve the equation. Graduation of the difficulties will give the following:

(1) 12 is $\frac{1}{3}$ of what number?

(2) 12 is $\frac{2}{3}$ of what number?

(3) 12 is $\frac{1}{3}$ more than (less than) what number?

(4) 12 is $\frac{5}{6}$ of what number?

(5) $2\frac{1}{2}$ is $\frac{1}{3}$ of what number?

(6) $2\frac{1}{2}$ is $\frac{2}{3}$ of what number? (More than, less than)

(7) $\frac{2}{3}$ is $\frac{1}{2}$ of what number?

(8) $\frac{2}{3}$ is $\frac{3}{4}$ of what number? (More than, less than)

Applications of this type of work can be similarly graded, thus:

(1)	S.P.	$360	Loss .25	Cost?
(2)	S.P.	$360	Gain 25%	Cost?
(3)	S.P.	$360	Loss 15%	Cost?
(4)	S.P.	$360	Gain 15%	Cost?

The terms may be varied, as, *commission, premium,* etc., (See page 192), and reconstructive exercises may be required (See pages 169, 170).

§10. *Metric System*

The chief difficulty in examples which involve the use of the metric system is the significance of the terminology. The familiarity of the pupils with the terminology may be tested by examples in addition or subtraction which are based on: (1) measurements of the same denomination, as, all *cm,* or *Kg,* or *mm,* etc.; (2) measurements of only two denominations, as, *cm* and *dm, Kg* and *g, cm* and *mm,* etc.; (3) measurements of three or more denominations.

Changes from one system of measurement to another, and the use of equivalents, can be graded as follows: (1) changes within the given table of equivalents directly, as, *meters to inches,* (1M = 39.37 inches), *Kilos to pounds,* 1Kg = 2.2046 lbs.), etc.; (2) changes which come within the table of equivalents only indirectly, as, *meters to yards,* (meters to yards to inches), *Cost of Kg at so much a pound,* (Kg to lb. × cost per lb.), etc. It may be necessary to test the

pupils on their knowledge of the following table of equivalents:

1 M = 39.37 inches
1 Km = 0.62137 miles (5/8 mi.)
1 L = 0.908 dry qt. or 1.0567 wet qt. (1 qt.)
1 Kg = 2.2046 lbs. (2 1/5 lbs.)
1 in. = 2.540 centimeters
1 ft. = 0.3048 meters
1 yd. = 0.9144 meters
1 mi. = 1.6093 Kilometers
1 qt. = 0.94636 liters, wet
1 gal. = 3.7854 liters, wet
1 qt. = 1.1012 liters, dry
1 lb. = 0.45359 Kilos

Similar units for foreign money may be worked out and applied.

§11. *Mensuration*

In its simpler stages, mensuration requires chiefly a knowledge of rules and formulas. Some of the more important of these are the following:

(1) *The area of any parallelogram is equal to the product of its base by its altitude.*

(2) *The area of any triangle is equal to half the product of its base by its altitude.*

(3) *The area of a circle is equal to the product of the square of its radius* $\times$ *3.1416.*

(4) *The circumference of a circle is equal to the product of its diameter* $\times$ *3.1416.*

(5) *The volume of a prism or cylinder equals the area of the base* $\times$ *the height.*

(6) *The surface of a prism or cylinder equals the product of the perimeter* $\times$ *the height,* $+$ *the area of the upper and lower faces.*

(7) *The volume of a pyramid or cone equals a third of the product of the base by the height.*

(8) *The surface of a pyramid or a cone equals half the product of the perimeter* $\times$ *the slant height.*

(9) *The volume of a sphere equals two-thirds of the volume of a cylinder of the same diameter and height, or,* $\frac{2}{3}$ *of* $\pi r^2 \times h\,(2r) = \frac{4}{3}\,\pi\, r^3$.

(10) *The surface of a sphere equals the curved surface of a cylinder of the same diameter and height, or,* $2\,\pi\, r \times h\,(2r) = 4\,\pi\, r^2$.

(11) *The square on the hypotenuse is equal to the sum of the squares on the other two sides.*

In many instances it is enough for the pupil to know how to use the rule, without having to repeat it by rote.

§12. *General Suggestions*

Tests in arithmetic may require any of the following types of work:

(1) Formal work and examples
(2) Problems and applications
(3) Reconstructive exercises, and explanation of processes

(4) Knowledge and recognition of the terms, expressions, symbols, and of a few rules in number work

The work itself may briefly be classified as follows:

(1) Four rules
  (a) Addition
  (b) Subtraction
  (c) Multiplication
  (d) Division
(2) Fractions
(3) Decimals
(4) Compound numbers
(5) Percentage
(6) Indirect cases

In all the grades, the pupils will probably be found weak in rapid addition of columns of figures. In the lower grades the children find difficulty with long division, and with some of the tables, notably those from 7 through 12. Easy control in work which calls into use fractions and decimals is

seldom found in the higher grades. The full value of the position of the decimal point is not appreciated. In percentage, there seems at times a negligence in pointing off the two places. The simplest kind of examples, using figures as simple as 2, 3, or 4, can be used to test the ability of the pupils in handling the aspects mentioned.

In an oral test, a call for hands and a random selection of pupils may be sufficient. If only a few pupils raise their hands, it may be assumed that the rest do not know. Or five of the best pupils, five of the middling, and five of the poorest may be selected to answer. A rating can then be given on the numerical basis chosen. Very easy examples or problems should be presented in such oral work, as, *Bought 11c worth of goods, and gave 25c. Change? John is 15 years old, and Mary is 8 years older. How many years in the ages of both? Cost of* $1\frac{1}{2}$ *dozen pens at 2c a pen? What is* $\frac{1}{2}$ *of* $2\frac{1}{2}$ *dozen?* $\frac{1}{2} \div \frac{1}{3} = ?$ $\frac{1}{3} \div \frac{1}{2} = ?$ *What is*

2% of 12? ½% of 12? What is the interest of $2, for 2 years, at 2%?

In a written examination, it is advisable to have the teacher select the types. The figures and the wording may then be slightly changed by the principal or head teacher. About half the paper should consist of work which the whole class can reasonably be expected to do, about a quarter should be of material so simple that even the poorest pupils ought to master it, and the rest should be more difficult work to bring out the abilities of the brighter children. If it is necessary to find out at what point in a problem the class breaks, then graded work should be given, or the problem should be worked out step by step, a call for hands after each step has been worked out indicating how many pupils succeeded up to that point.

VIII

CONTENT OF OTHER SUBJECTS

§1. *Kinds of Knowledge*

The simplest type of knowledge is that of recognition. Though, as such, it requires little effort and calls for no great expense of energy, it is in constant demand in our daily life. For many practical purposes it is indispensable. For example, one need do little more than recognize the poison tablet, know counterfeit money at sight, understand the significance of specks in tainted food, judge between good conduct and evil behavior, etc., in order to react properly. No long series of events need be recalled, no process of reasoning is called into play, nor is there required any control of material to ensure the simple recognition. While, no doubt, judgment and long training may be

a prerequisite to some of the more difficult acts of recognition, once the knowledge has become automatic, the acts of recognition are immediate and make no demands on associative memory, complicated reaction, or motor control.

In school work this recognition is indicated by simple naming of an object, by location of a situation or event in time or place, by giving the significant attributes of a thing, by showing its use, and so on. A simple sentence is all that is required of the pupil. In history, for example, many names, events, processes, actions, etc., require for practical purposes simply recognition. Questions which would call knowledge of recognition into play are the following: *Give sentences which tell something each about the following: Washington, slavery, Monitor, Declaration of Independence, cotton gin, Queen Elizabeth,* etc. In geography, nature study, and science, similar questions may be formulated, as, *Give for each of the*

following a sentence which tells something about each one: Product, Germany, Washington, Rhone, industry, flax, etc., or, *poliwog, fern, woodpecker, sepal, petal,* etc., or, *magnet, rheostat, vacuum, Newton,* etc.

A type of knowledge which makes a more immediate and pressing demand upon the pupils is knowledge of recall. Recall involves memory exercises of the school, and is concerned with such topics, as, spelling words, dates, lists, definitions, topics, topical outlines, memory gems, human activities, causal series, etc. A cue is given to the children, and they are expected to respond with verbal series, written expression, manual work, etc., and in a more or less extensive manner.

The highest type of knowledge for the individual concerned is that of reconstruction or control. Considerable initiative and ability are often demanded. A problem is set before the pupils, material is given, and they are told to go ahead. Knowledge of

recognition, knowledge of recall, and adequate motor and manual responses are put to the test. Knowledge of control is demanded when the pupil is called upon to exercise his judgment, to put forth effort in a manner somewhat different from the routine, to handle material in his own way, to exercise his selective choice and controlled reaction. He may be required to get the topics of a series of paragraphs, form a topical outline of his own, and then expand this outline in his own language. He may be allowed to dramatize a situation and add words and actions of his own. He may be requested to impersonate a character, with the direction, *What would you do in such a case?* Or a situation may be presented to the class with conditions changed, and the pupils may be asked to trace and expand possible results. Thus: *Suppose the Alleghany Mountains were as high as the Rockies, how would it have effected – ? (Discoveries, settlements, population, etc.) What*

if – had not invented the – ? Suppose the harbor of – to be clogged up. What would the result be on the commerce, population, export trade, manufactures, etc.

In summary, we have as kinds of knowledge:

Knowledge of recognition
Knowledge of recall
Knowledge of control

These three types are all relative to the stage which the pupil has attained. To the beginner, knowledge of recognition is very limited, and most of his information is the result of memory and recall. What required considerable judgment and associative memory in the earlier stages, however, must take its place in the field of recognition, if the individual is to progress. The movement is ever onwards, effort in all reactions becoming less, and the horizon ever widening for new endeavors.

Simple reference to any of the following aspects is sufficient to indicate knowledge of recognition:

Relations

(1) Quantitative

Time: *Succession, duration, simultaneity*

What follows in time?
What is present at the same time?
How long? When?

Space: *Contiguity, distance, direction*

Location? Position?
Distance? Direction?

(2) Qualitative

Characteristics? Attributes?
Substance? Kind?
Parts? Whole?
Genus? Species?

(3) Formal, logical, analytical

Cause? Effect?
Similar? Contrast?
Purpose? Opposite?
Use? Design?
Significance? Meaning?

(4) Personal

Superior
Ruler
Employer
Parent
Etc.

Equal
Equal
Coworker
Relative
Etc.

Subordinate
Subject
Employee
Child
Etc.

It is evident that an extensive use of these relations may give rise to knowledge of recall, and call into play considerable control. In their first intent, however, they inhere particularly in knowledge of recognition.

Knowledge of recall embraces memory work in the following subjects and topics:

Spelling

Reading and pronunciation of words
Spelling, stem analysis, meaning, use
Antonym, synonym, grammatical forms

History

Names, dates, events, etc.
Topics and topical outlines

Geography

Names, places, activities, etc.
Topics and topical outlines

Study of nature

Names, processes, products, etc.
Topics and topical outlines

English

Memory gems, selections, etc.
Names, definitions, forms, in grammar
Punctuation, written form, paragraph structure, etc.

Music

Notes, scales, songs, etc.

Drawing

Forms, lines, colors, etc.

General information

Knowledge of control makes more of a demand upon the pupils, and includes work in the following:

Topics and topical outline
Series of related events
Dramatic impersonation
Dramatization
Reasoning from changed conditions
Reasoning from given data
Control of material

Original problem work and reconstructive exercises are here required of the children.

§2. *History and Civics*

While the general forms of knowledge may be considered the three above discussed, the specific details and content depend upon the subject under consideration. For purposes of testing, one can outline each of the subjects in a number of topics and sub-

topics. Examination in United States history may be given under any of the following heads:

Discovery and exploration
Colonization
English supremacy
Colonial supremacy
The United States
Use of the text-book
Current events, holidays, etc.

In detail, the following facts can be used:

Discoveries and explorations

Nationalities

Spanish, French
English, Dutch

Localities

Coast, north, south, middle, etc.
Inland, west
South America, etc.

Purpose, etc.

European and American backgrounds

Colonization (as above)

Southern type, Virginia
Northern type, Massachusetts
Middle type, Pennsylvania
Local type, New York (for New York)
Organization, people, activities, life, events, etc.

English supremacy (as above)

Indian wars
Intercolonial wars
Attempts at union
European history

Colonial supremacy (as above)

Conflicting interests
New British policy of control
The Revolution
The Constitution

The United States

Administrations
Industries and invention
Transportation and communication
Education, life, and literature
Money and finance

Tariff and slavery
Wars
Legislative changes
National expansion
Political parties
European history
World relations.
Use of the text-book
General meaning, story, etc.
Background, allusions, etc.
Topical study, outline, etc.
Sequence and organization
Word study, etc.
Holidays and current events
Civics
Local, state, national government
Organization, departments, officials, etc.
Time and place of meeting
Powers, duties, responsibilities
Contributions, work accomplished, etc.
Use of the text-book
Current events

§3. *Geography*

Knowledge in geography may be tested in any of the following main divisions:

Human activities and their products
Human habitations (Cities, states, countries, etc.)
Surface (Highlands, lowlands, plains, rivers, etc.)
Climate, seasons, day and night, time
Maps, graphs, cartography, etc.
Use of the text-book
Current events

According to the age and grade of the pupils, the above categories may be applied to the following topics:

Home locality and neighborhood
Home city, state, or country
The world in general
The United States in detail
Other countries in detail

The use of the text-book follows the same scheme of merits already enumerated, namely: *(1) general meaning of text, illustration, map, graph, etc.; (2) background, allusions, comparisons, etc.; (3) topical study and outline; (4) sequence and organization; and (5) word study and interpretation.* Current events are treated as in the case of the other subjects. Individual contributions of the pupils should be recorded, credit given according to the class register and the number contributing, and a general knowledge of the leading currents required.

§4. *The Study of Nature*

The same general content inheres in both nature study and science. The difference in the treatment of the topics distinguishes one from the other. Nature study deals with description and appreciation, and keeps intensive analysis in the background. It is concerned more with life, function, and environment, than with structure and or-

ganization. Science makes more of a search after cause and effect, requires more thorough study of parts, and makes use of logical categories and divisions. Both science and nature study call for actual contact with objects, for field work, excursions, and controlled experimentation.

General topics which apply in the study of nature are the following:

External characteristics, form, color, etc.
Internal characteristics, structure, parts, etc.
Growth, development, function of parts, etc.
Actions, processes, work, life, etc.
Favorable conditions, environment, etc.
Uses to man, products, etc.
Use of the text-book
Contribution of specimens, apparatus, etc.
Current events

The use of the text-book and of current events follows the same general scheme out-

lined above (page 213). Each pupil should have a record of the experimentation done by him, the material contributed, the apparatus made, etc. With the register of the class as a basis, the whole class can be rated in this particular. The grade of the pupils will determine what aspect of the study of plant life, animal life, natural phenomena, or man. is to be required.

§5. *Language*

The study of language on its content side includes chiefly the following subjects:

Word study
- *Spelling, meaning and use*
- *Stem, prefix, suffix*
- *Synonym antonym*

Grammar
- *Proper usage*
- *Naming (parts of sentence, of speech)*
- *Formal analysis*
- *Syntax*

Race inheritance

Jingles, rhymes, proverbs, etc.
Myths, legends, fairy tales, folk-lore, etc.
Biography, narrative, etc.
Selections from literature
Memory gems, etc.

Written work

Writing, punctuation, etc.
Letter forms, paragraphing, etc.

Library, reading habits, etc.

In language tests, the questions may deal with particular instances, forms, etc., or with sentences in series, in paragraph structure, etc. Thus, spelling words may be given in a list, or in a dictation exercise. Similarly, word study may be correlated with a selection in reading, or may deal with isolated cases assigned by the teacher. In grammar a paragraph may be given, and the class required to treat it in any one of the following ways: *(1) rewrite and change to plural (or singular) form, to first person*

(second or third), to present time (past or future), to different discourse (direct or indirect), to different sentence type (interrogative, declarative, etc.; (2) pick out the types of sentence and name each kind; (3) pick out parts of speech; (4) analyse sentences into parts, with diagram, if necessary; (5) give syntax of selected words; and so on. Separate sentences may also be given, or the text-book may be used and treated as suggested.

On the side of content, composition correlates closely with the subject matter of the grade, and with the children's life history and experience. History, geography, nature study, science, drawing, reading, games, neighborhood life, school life, business, etc., will furnish sufficient material on which the pupils may be tested. For purposes of examination, the formal composition written each week or so is not as good as an impromptu test which requires only a single paragraph to be written on some topic with

which the pupils are familiar. Several topics may be assigned and the pupils allowed to choose one for composition. In correcting the paragraphs which have been written, a set of values may be assigned, according to the aim of the work, as, paragraph structure, margins, punctuation, etc. For example, if two merits are looked for, (1) paragraph structure, and (2) spelling, each may be valued at 5 out of a possible 10. If the content in history, or geography, this may also be rated on its correctness.

Dictation may be treated in the same manner. The content of the dictation may include the following:

(1) Short memory gems and classic prose selections

(2) Short sentences which employ such words, as, (1) forms of the verbs, is, do, see, come, go, give, write, sing, bring, think, break, catch, drive, know, throw, lie, lay, run, eat, tear, etc., and (2) plurals, irregular comparisons, etc.

(3) *Short sentences, or a short paragraph to illustrate use of the period, comma, question mark, and quotation marks, etc.*

(4) *Common expressions, conventional expressions of courtesy, greetings, idiomatic expressions, etc.*

(5) *Letter forms.*

(6) *Correlated material from history, geography, etc.*

Should a prevailing error be discovered in composition work of the grade, a dictation exercise on the error in question will enable one to see what pupils require individual attention, and what steps towards correction need be taken.

Paragraph structure may be required in tests on meaning and use. Often, the full meaning of a word can not be well given in a single sentence. Several sentences may be required fully to amplify and make clear the meaning of the idea expressed by the word. Pupils should be asked to write a short para-

graph for a single word, if necessary, when a test in meaning and use is given. In an exercise on word analysis, the children may be requested to give words having the same stem, and being in the same 'family,' to give opposites, to tell the usual phrase combination in which the word is found, to write other grammatical forms of the word, and so on. A real spelling test involves much more than simple spelling of words.

To test the use and effects of the library one must consider the following points: (1) number of books read by each pupil, or used by him for reference; (2) quality of the matter read; (3) periodic discussion of current events, contents of newspapers, weeklies, etc. If there is a list kept of the books read by the pupils it will be easy to rate the class in this particular, the register of the class being taken as the basis. A few questions put to the pupils may be necessary to test to what extent the pupils have really made use of the books drawn.

§6. *Manual Work*

Such exercises as drawing, writing, sewing, modeling, shop work, etc., are usually rated solely from the side of expression. Any piece of work, however, may be examined from the standpoint of content, analysed into a number of parts, and given a mark for each part. In the drawing of a box or a cylinder, for example, values may be assigned to the characteristic lines and curves. A single aspect may be made the standard and the work counted right or wrong as a whole, according as it meets or fails to meet the requirements.

Penmanship may be analysed into several merits, as, *(1) slant, (2) movement, (3) quality of line, (4) legibility, and (5) cleanliness.* Each of the pupils' papers may be marked according to these merits, and a value given to the set, on the basis of 20 for each excellence. If the papers are arranged in the order of legibility and general appearance, the median paper may be selected

and marked. To test specific aspects of penmanship, one can arrange special sets of words for loops, small letters, etc. Thus, the words, *going, going, gone,* contain exactly five lower loops. If these words are dictated to the class, the papers can be corrected on a numerical basis, 2 points out of 10 being allowed for each loop. If the same set of words is given to each of the grades, it is possible to find how the classes compare in this particular. Similar series of words can be given to test other formations, as, *This is his happy, happy home,* for the upper loop. *Very many men came,* for the *m* form, and so on.

§7. *General Suggestions*

In most of the oral work, the pupils will be found weak in sustained oral discourse. They seem to need, or to be accustomed to continual prompting by the teacher. They give partial answers, and expect the rest to be filled in by the listener. The use of 'and' may be overprominent. When a written test

is given in history or geography, the pupils do not consider so much the language which they use as the accuracy of the facts given. As a result the English is usually vile. Papers which call for written expression should be marked not only on the correctness of the content, but also on the written expression. A general, serial rating may be given, as, *A, B, C,* or *D.*

In oral testing, a call for hands may be sufficient to indicate to what extent the pupils are able to answer. Several oral questions may be given, and the pupils required to write the answers on a small sheet of paper. Correction is then made as in the usual marking of written work. In a written examination, the work may be all of the same kind, as, knowledge of recognition, or of recall, etc., or it may contain a mixture of the three varieties. Three separate tests, each rated on the basis of 100, may be necessary to rate the knowledge of the pupils in recognition, recall, and reconstruction.

V

RESULTS OF DISCIPLINE

IX

RESULTS OF DISCIPLINE

§1. *Personnel*

Checking up the personal neatness and cleanliness of the pupils is done in much the same manner as is the daily inspection of hands, clothing, etc. The children place outstretched hands upon the desks, and a rapid count is made of dirty hands and finger nails. Feet are then placed in the aisles for inspection of shined and unshined shoes. The number of pupils who have hair uncombed, and the number of girls whose hair is not properly arranged are counted. Further inspection will note the clothing of the children and its condition, as, buttons off jackets, waists without collar or tie, absence of hair ribbon, etc. A rating can be given on each of these points, the attendance of the

pupils being taken as a basis. The excellencies to be considered in an inspection of the personnel of the pupils are the following:

Personnel of the pupils	100
Hands	20
Face	20
Hair	20
Shoes	20
Clothes	20

A little investigation of the personal habits of the children will show some peculiar conditions. Pupils of 10, 11, or 12 years of age may confess that they have never combed their hair as long as they have lived. Teachers have voluntarily gone to the homes of their wards and in some cases have compelled the parents to stop the practice of sewing up their children in one or more undershirts to protect them from the cold; the aforesaid undershirts remaining unchanged on the children throughout the winter. If the pupils are too poor, there may

be a class committee to look after collection of clothes, etc. Such material as soap, paper toweling, (newspaper serves the purpose), blacking box, etc., will do much to improve the personnel of the pupils.

§2. *Material*

Material of the children may be checked up in the same manner. If books are to be inspected, some book in constant use, as, reader or geography, is selected. Books are placed on the desks, and the outside is noted, as, covered or uncovered. The inside of the book is then looked at, advisedly some page that has been read, or some map in constant use. A count is made of books which are marked, etc., as by tracing of maps, scribbling, pictures, etc. Material in other subjects, as, shop work, sewing, etc., may be similarly examined. In such instances, the external condition is noted, as, of covering, envelope, oiling, freedom from rust, etc.;

and the general condition of the objects checked up, as, lack of waste, fitness for use, order, etc.

Written papers, drawings, note books, etc., are next in order. Some specific aspect should be made the point in the inspection, as, accuracy of the text, cleanliness and freedom from blots or dirt, general appearance, and the like. If the books, etc., show no indication that the teacher has looked at them and marked them in some manner, this should be noted.

Pencils, pens, pencil bags, ink, etc., require constant looking after. Pupils are more or less careless in these particulars, and weak discipline shows itself, in one way, when many pupils are badly provided with pencils, etc., and when there is a general lack of order and system in their care.

A final consideration on the material side is the general condition of the pupils' desks, floor, etc., and, if necessary, of the teacher's closet. After the pupils have placed hats,

books, etc., out of the desk boxes, a rapid count of desks with dirt under them or in them can be made.

The different points included under the head of material are:

Material of the children	100
Books, etc., outside	20
Books, etc., inside	20
Blank books, papers, etc.	20
Ink, pencils, pens, etc.	20
Floor, desks, closets, etc.	20

As a basis for the ratings given, the attendance of the class is taken, and deficiencies are calculated and deducted from the total of 20 in each merit.

It is surprising what demoralization results when there is no systematic attention to the details above enumerated. Geographies may be marked by tracings of maps, etc., pages may be torn from arithmetics or grammars, or remarks of questionable ethical import may be inscribed on the margins.

Home work books and written note books will usually show rapid deterioration towards the end. Dirty floor, missing inkwells, loss of pencils, rulers, scissors, etc., are the additional burdens which a teacher will create for herself by neglecting the material aspects of discipline. All these deficiencies will be in great part avoided by systematic inspection and checking up.

§3. *Routine*

Routine includes such results of discipline as should be more or less automatic. Things should go on of themselves, as it were, without continued exhortation and instruction. The details to which routine should apply are, heating, lighting and ventilation, passing of material, entrance and dismissal of pupils, and absence and lateness.

Ventilation, etc., can be attended to by the pupils. Windows may be found closed, slightly open at the top (or bottom), wide open at the top (or bottom), or properly

open at both top and bottom, where automatic ventilation is not in use. During physical exercise and setting up drills, windows should be opened both at top and bottom. The above degrees of excellence may be rated 5, 10, 15, or 20. If ventilation is regulated by some system out of control of the teacher, it can be reasonably expected that unsatisfactory ventilation be reported at the close of the session. Failure to report or keep a record may be rated on a basis of 4, 5, or 10 as the case may be. Improper use of shades and control of lighting may be checked up in a similar fashion.

In a class properly disciplined and under good control material will usually be passed in a systematic and orderly fashion. It may be passed by the pupils from the front to the rear of the room, by aisles, or across, from one side to the other. Pupils who do not pass properly may be counted against the total number present. If a teacher has apparently no system at all, and flutters

around the room giving out material herself, the principal should be charitable, and call her attention to her fault by putting a question mark under the proper heading on the blank. Persistence of this error should be rated 0. Books, rulers, pencils, etc., may be distributed and collected as a formal drill.

Entrance and dismissal are subject to the same method of examination. Do the pupils keep a good line formation? Do they pause at the corners of hallways, at the door of the room, etc.? Has the leader been carefully selected? Is there a class captain, or president, who can direct the class if necessary? Such faults as running, irregular line formation by some of the pupils, improper spacing, hurry in entering the room, etc., should be counted up, and given a negative value on the basis of the total number of pupils present.

In the case of absence and lateness of pupils, a record can be kept each month, and the teachers graded in four, five, or ten

divisions on a percentage basis. The highest division will receive 20, and the others a proportionate rating according to the division in which they are.

In summary, routine consists of the following:

Routine	100
Heating, ventilation, etc.	20
Passing of material	20
Entrance and dismissal	20
Absence	20
Lateness	20

A number of signs, like the handwriting on the wall, indicate upon only a cursory inspection, that something is wrong with the discipline of the room. If the class is under poor control, passing of material may vary between omissions to pass, to throwing things across the room. Entrance and dismissal then become a shaking of the head and a byword among the teachers on the floor, and consist chiefly of rushes out of the

room, or rushes into the room, helter skelter. In less deficient form they may be marked by straggling, lack of orderly line formation, or hurried, rapid marching. When truants abound, and late pupils regularly equal a large part of the class, it is safe to infer that the discipline needs tightening. It is surprising to note what a difference results either for better or for worse when a new teacher enters the room. The class may, within a day or two, become one noted for order, or, contrariwise, it may pass from order to anarchy.

§4. *Response*

Psychologists are not agreed as to what constitutes a test for attention. In the classroom, therefore, it may be impossible definitely to determine whether this or that pupil is attentive, and fully occupied with the work which is being presented. For practical, pedagogical purposes, however, it is safe to assume that those children are not

paying sufficient attention who are looking out of the window, talking with their neighbors, playing with and looking at objects under the desk, etc. So long as a pupil has the attitude of attention and fixates adequately the object, blackboard, teacher, etc., he may be counted as attentive. This does not necessitate a rigid posture, nor does it preclude leaning forward, or the various motor diffusions which may manifest themselves by finger or face movements, etc.

Pupils are sitting properly when their feet touch the ground, and when their bodies are reasonably erect. Hands should be in front of them, and not 'behind backs,' nor on top of heads. In written work, the elbows should not be too high, nor should the pupils bend over the desk or press closely against it. A rapid count will tell how many pupils are sitting properly and how many are not. Correct grouping of the pupils is also a desideratum. Effective visualization requires the pupils to sit the long way of the

room, to prevent foreshortening of objects, and to be within the teacher's line of sight. Massing in semicircular form in front of the teacher may also be necessary, as in group instruction.

When pupils are standing properly, the head, and not the abdomen, is up and forward. Hands are by the side, not on top of desk or in pockets. The basis for rating may be the four or five children who have stood while reciting during the lesson, or it may be the whole number of pupils observed during a drill, or called upon to stand for setting up exercises. If the pupils are called upon to 'show how well they can stand,' they are practically told what to do, and no honest rating can be given.

Individual response of pupils can be measured in the classroom and out of it, in fact, wherever the pupils may be met. Training leaves its mark and can always be told. Lack of such training and response is evident when the teacher is continually reporting

pupils for misbehavior, and seems unable to control them. Disorder in the room, as, persistent talking, changing seats without permission, walking around the room to attract attention, etc., indicates a similar lack of individual response on the part of the pupils.

Class response, as a whole, is a somewhat different result from individual response, and calls for another type of discipline. Class response is not made up of the sum of individual responses, as such. It is an integral whole, and calls for unit action. It is manifested in satisfactory drills, singing, group work, and the like. It differs from routine, in that directions are necessary from time to time. Straggling reaction, intentional interference by one or more pupils, weakness in rhythmic movements, etc., count against this merit. A rating may be given on a numerical basis, the number of pupils interfering being counted out and valued on the basis of class attendance; or a general estimate may be made. In the latter case

the teachers are grouped in four or five divisions, according to the number of times the class has been disorderly while in the teacher's hands, or has failed to respond as shown by inspections, complaints, or calls for help.

The excellencies which constitute response of pupils in general, are the following:

Response	100
Attention	20
Sitting	20
Standing	20
Individual	20
Class	20

Lack of attention is a common complaint, even with the classes of experienced teachers. A teacher makes matters only worse by constantly asking for the attention of pupils, or by nagging. It may be that a drill is needed, with such exercises as breathing, stretching, etc. It often happens that a teacher runs over the time assigned for the

subject, and becomes a bore to the children. There may be no proper use of incentives, questioning, etc. The pupils, like the prisoners in cells who can not escape, may be compelled to listen to the talk of the teacher, when they are longing for a chance to talk, or work, or do something. Where most of the pupils show little attention, it is safe to assume that the lesson is a failure.

Sitting and standing of pupils often is neglected by some teachers. Desks may be too high. Pupils may be allowed to stand with hands in pockets, or holding on to desk tops. The old practice of having the children sit with their hands behind their backs or placed on top of their heads may be found. Where there is lack of response, it may be due to a weak, flabby manner of the teacher, and an insipid, droning manner in giving commands. Pupils like snap and vigor, and will respond to it.

§5. *Class Activities*

A number of simple class activities can be expected of the teacher, and will do much to create good class spirit, and easy, natural discipline. Classroom decoration, as a result of the efforts of both pupils and teacher, is one of these. Statues, framed pictures, charts, work done by the pupils, contributions, etc., can be so arranged within the room as to make it attractive and pleasant. Quantity alone is not the sole requisite. There must also be considered the grouping, color, form, and subject harmony, appropriateness, and placing. The different rooms in the school can be arranged in a series of 4, 5 or 10 grades according to their excellence, and a rating given on the basis of 20.

Interclass exercises differ from interclass games in that they are concerned more with the different grade subjects, history, language, spelling, arithmetic, etc., and are more academic in character. All written work of any kind can be passed from one

class to another, of about the same grade, for correction, imitation, answer, etc. So, too, one class can visit another to see the room decorations, to hear the oral work, to observe a drill, and so on. An interchange of courtesies, as it were, can take place. The best pupils, at times, might be allowed to go to another class to show their work, recite, etc. It will be found that some teachers have a program of interclass exercises nicely prepared, well integrated with their work, and faithfully carried out. At the other extreme will be found those who have not tried anything as yet, who may, perhaps, not believe in it, or who do not quite know what it is all about. The classes can be arranged in a series between these two extremes, and a value given according as they fit in one of four or five divisions.

Interclass games can be treated in a similar manner. Competitive athletics, gymnastics, dancing, games of any sort, are here included. They may call for the services

of teachers after sessions, and they necessitate program and preparation. A final tournament among several classes may be held. Interclass games are sometimes correlated with the other class activities, as in the case of excursions, or individual studies of pupils. When a class is taken out on an excursion, it may meet another class, and cooperate with it in its work, games, and exercises. Similarly, in organizing interclass games, an appeal may be made to some of the pupils, by assigning them posts in the game, or parts in the play.

A promised excursion to the country, to a museum, historic place, park, etc., usually sets the children wild with excitement and pleasure, especially in crowded sections of the city where they have little opportunity to get out. In such a case a regular program should be arranged and details of the following nature recorded: (1) permissions from the parents allowing the children to go; (2) provision for such pupils as remain;

(3) the route to be taken; (4) the number taken, and the number returned; (5) the number of accidents, if any; (6) the program, giving exercises, games, points to be noted, etc. A record of each excursion, with the above data, properly dated, should be kept by the class teacher, and a copy filed in the office of the school. A class club may also be organized. Meetings are held, receptions are given, parents are invited, a class 'party' is arranged, and a good social spirit is developed. In rating teachers in this particular, the classes may be arranged in a series, and grouped in four or five divisions. Those in the first division get 20 credits out of 20, those in the second get 15, and so on.

Finally some credit is due the teacher who makes a special study of a pupil who has a bad name, who is truant, or reputed to be incorrigible. How has she handled such a case? What has she done in adapting the work to the pupil, in helping him individually, in cooperating with his parents, in visit-

ing his home, and so on? What use has she made of manual work, or dramatics, of occupations which call for responsibility, etc.? Has she spoken to him alone, and used every kind of personal appeal? With one teacher, such a pupil seems no different from the others, and will respond naturally and cheerfully. With another teacher trouble starts as soon as the pupil is in the room, or shortly after he enters. Grading of teachers and rating will follow the general scheme outlined in the preceding paragraph.

The various class activities with their value is given below:

Class activities	100
Classroom decoration	20
Interclass exercises	20
Interclass games	20
Excursions, clubs, etc.	20
Individual studies of pupils	20

In the matter of class activities some deficiencies and dangers are to be noted. Many

teachers decorate the room in a somewhat aimless fashion. The growth is one of accretion, as it were. A new picture or chart appears, and it is placed in the first empty space that presents itself. As a result, there will be a mass of room decoration, of which the greater part detracts from the appearance of the room because it is either in excess, or not properly placed. One should avoid making of the room a curiosity shop. Planning and care are necessary.

When an excursion or a class 'party' has been arranged for, it is necessary to keep the children within bounds. There is usually the danger that, in the excitement, disorder results, and other classes are interfered with. No children should be allowed to roam about the halls, pay 'friendly visits' to other classes, or to show themselves outside of the classroom. When the class moves, it should move as a body, without stragglers of any kind.

§6. *Social Morality*

It is evident that in the results of discipline as enumerated above, there is present ethical training of a high order. Cleanliness, hygienic and external, is necessary if the personnel of the children is to reach a satisfactory standard. Material and its care involve such virtues as system, order, neatness, economy, service, and work. Routine demands such good habits as obedience, regularity, cooperation, and the like, while response necessitates courtesy, respect, self-control, docility, and so on. In the different class activities there is opportunity for social contact, intercourse, and practice.

Results in instruction also carry with them, by necessity, considerable ethical training. Obedience is necessary to secure such reaction as is indispensable to good work. Neatness, cleanliness, order, system, and arrangement receive a value in all of the subjects. Good habits of thought are provided for in the organization of the

material, and in problem work and reconstructive exercises. Initiative is similarly encouraged, and individual control is stimulated in the requirements which call for knowledge of control. Regularity, industry, and persistence are essential to progress in any subject. The different forms of expression which are required, allow for such individual differences as the pupils may possess, and tend to develop individual interests among the children. Honesty, truthfulness, obedience, respect, and effort are a *sine qua non* in the teaching process, if satisfactory results are to be reached. So the story runs.

Among many, however, there is a demand for more specific instruction in ethics, and for a conscious, systematic treatment of social morality. Just as the various school subjects undergo differentiation in the grades, so, it is held, social morality should become essential rather than incidental in the teaching process. Systematic guidance by topics is asked for, with marks, check-

ing up, etc., as in the case of arithmetic or history.

A convenient list of topics and headings under which the different aspects of social morality may be grouped are the following:

Conventional courtesy

Use of such expressions, as, Please, Thank you, Excuse me, Yes sir, Yes ma'am, etc.

Good breeding, and absence of roughness, censoriousness, raillery, contradiction, captiousness, excess of ceremony, interruption, and dispute (See Locke, Some Th. Con. Ed.)

Social duties

Courtesy and consideration
Toleration and reasonableness
Respect and reverence
Obedience and docility
Self-reliance and self-control
Social service and cooperation

School conduct

In the school building
Outside of the school building
In the classroom
(Results of discipline, in part)

Civic obligations

Absolute rights

Of person
Of property

Obligatory rights

Of contract
Of domestic relations

Remedial rights

Private wrongs

Assault and battery
Defamation, libel, slander
Fraud and oppression
Trespass and conversion
Nuisance
Negligence

Public wrongs

Treason, rebellion, resistance, etc.
Embezzling, bribery, perjury, etc.
Smuggling, usury, etc.
Adulteration, vagabondage, nuisance, etc.
Assault, battery, kidnapping, etc.
Larceny, robbery, forgery, etc.

Many of these topics are treated incidentally in subjects like history and civics, but the legal aspects are not presented specifically and with sufficient emphasis.

As in the case of knowledge, so with social morality, three grades of reaction can be demanded. The pupils may be told or shown an instance, and asked to tell what it represents, what specific virtue or moral it carries, or simply, whether it is good or bad, legal or illegal, satisfactory or unsatisfactory. A higher type of reaction is necessary if the children are asked to recite on a given topic, answer questions at length, tell illus-

trative stories or incidents, etc., just as they do in history, geography, or grammar. Finally, complete reaction as in dramatization or in actual behavior may be required, or a discussion with reasons, etc., may be asked. The three types of reaction are therefore, *(1) recognition, (2) recall, and (3) control or reconstruction.*

For example, one may ask the class to distinguish between the correctness or the incorrectness of the forms, *Give me,* and *Please give me.* They may be required to make requests for different objects. Or one may give help to a pupil, incidentally, and see whether he will respond with a, *Thank you.* The class may be tested on the proposition so common among the children, *Findings is keepings.* Explanations, reasons, and a discussion may be called for. They may be asked to explain and discuss the maxim, *Honesty is the best policy.* Specific instances may be put before the class for recognition as to their ethical import, for discussion,

imitation, etc. Current events, history, and biography afford abundant material for such a purpose. Dramatization is possible in many cases to show types of social behavior which should be imitated.

VI
APPENDICES

APPENDIX A

THREE RULES OF INSPECTION

Whether it is the teacher who is testing pupils, the principal who is inspecting teachers, or the superintendent who is examining a school, the following three rules should be followed, rigidly and without exception:

RULE ONE: WHATEVER STANDARDS AND TESTS ARE APPLIED SHOULD BE DEFINITE AND KNOWN IN ADVANCE BY THE INDIVIDUALS WHO ARE TO BE EXAMINED.

It is very easy to evade this rule by assuming that the teacher should know her work and should be able to meet any tests given. But inexperienced teachers will neglect some phases of the teaching process, while older ones may follow narrow but well-grooved paths. Moreover, (whisper it softly), there is always the possibility that the examining official may have unique standards which will not bear the cool air and dry light of reason, may, in fact, know less than the one whom he is inspecting. If the teacher is instructed in the details which are to be looked for, right or wrong, she can at least follow instructions, and meet the examiner half way. Then there are always differences due to varying

emphasis on one or the other phase of the teaching process. If stress is to be laid on oral or other work, the teacher should know of it, lest she unconsciously offend by spending too much time on written or motor appeals. If a superior official really has standards, these should be definitely stated, and given to the teachers concerned.

So much is usually granted. But in the matter of tests and examinations, it is too often the custom to 'spring' a set of questions upon the teacher, and to ask her to give them to the class, without consulting her about what she has done, or cooperating with her in the least. Just what is gained by such a process, it is hard to determine. If the examiner wants to know what the teacher has taught, he can find out by asking her, or by looking at her plan book. If he wants to find out the results of the teacher's instruction, any tests given should correspond with such instruction, and this is possible only when the teacher is consulted in the matter. If the supervising official wishes to have types of a special kind taught, it seems only fair that such types should be given to the teacher in advance. Whatever be the case, there should be some cooperation between the inspecting official and the teachers supervised by him.

It is held that if type problems or outlines are given to the teacher, she will work along narrow lines and will present only individual cases to the children. But types and outlines can be made sufficiently inclusive to cover any field in any subject.

And when a teacher is not taken into confidence nor allowed to cooperate, a condition is created which results in a process more narrowing than any which could be produced by the setting of types and outlines. In fact, when arbitrary and unrelated examinations are given by the supervising official, the teacher quietly collects the few questions given at different times, studies the peculiarities of the examiner, (who is but one and therefore narrow), and then does little more than drive the pupils along the lines unconsciously laid by the examiner. He naturally finds 'improvement,' and smugly reports the progress made under his supervision. And with each new supervisor the process may be repeated.

Even if it be granted that such a thing as general 'power' can be developed and tested, the limits within which such power is to operate can be clearly indicated in advance. Usually such 'power' consists in the knowledge of two or three tricks in number which can be readily memorized, and in the cramming of a set response to a form of question which is considered by the examiner as a sure test of 'power.'[1]

[1] There seems to be no good reason why courses of study should not contain, not only directions on method, but sequence and organization of subject matter, and definite types and outlines. The usual course of study is arranged logically, may be followed, and so may automatically ensure poor instruction. See the excellent analysis of different courses of study in arithmetic, in *A Brief Course in the Teaching Process*, by G. D. Strayer, Ch. XVIII.

When a supervisor neither assists nor encourages the teachers, and fails to get their respect and co-operation by such means, as a last resort, he has the examination which he can use like a lash. It is a petty way to arouse a stir which is mistaken for increased efficiency, and to create a feeling which may wrongly be considered respect or reverence, but which is neither the one nor the other. The feeling aroused is much akin to the sense of disgust and unrest which is produced in one, when one is aware that there is a snake loose, nearby. One knows not what is to follow, nor what is to be expected. It is well known, that, when an examination is given without cooperation with the ones to be tested, the questions can be 'jockeyed' so as to produce practically any result, from 5 or 10% upwards. And it is equally well known that the results of examinations can be used as a kind of 'evidence,' if, as the politicians say, it is necessary 'to get' the teacher. Variations within the course of study are infinite, and, when subject to the whim of an irresponsible examiner, are capable of producing any percentage results.

RULE TWO: ANY WRITTEN REPORT, INSPECTION, ETC., USED OFFICIALLY AND BEARING THE TEACHER'S NAME, SHOULD BE GIVEN IN DUPLICATE TO THE TEACHER CONCERNED.

This rule is followed to a great extent by many principals and superintendents, and is gradually receiving wider recognition. It is now common for

the supervising official to write a criticism of a teacher's lesson and to leave a copy with the teacher. It is, however, not so common to leave with the teacher a copy of any report which is regarded as 'confidential' in the higher circles. But the rule should hold without exception. Everything connected with the teacher's record should be given to her in duplicate.

It is seen that the first rule is closely related to the second. If the teacher has not received standards and types as a guide, a written report may mean little to her, for it may be written from a different viewpoint each time. It is this inconsistency which makes of supervision such a bugbear—usually an actual hindrance to classroom work. The inspecting official may have a set—and a wrong set—of which the teacher is not aware. The written suggestion operates then like a damper; and supervision, instead of aiding and encouraging the teacher, depresses her and hangs like a yellow cloud over her work.

RULE THREE: ANY REPORT WHICH MAY BE QUESTIONED, SHOULD BE SUPPORTED BY FACTS—BY PRIMARY EVIDENCE. WITHOUT THE DATA UPON WHICH IT IS BASED, IT SHOULD BE THROWN OUT WITHOUT THE LEAST CONSIDERATION.

When reports upon classroom work are written from wrong points of view, or upon slight and insufficient data, they mean practically nothing more than the whim or opinion of a biased or incompetent

official. It is easily conceivable that a sodden Pharisee may report on his own efficiency and fulness of heart, and upon the weakness and inefficiency of the teacher, when the facts might reverse the positions stated in the report. What is means by 'unsatisfactory' service? How large a share in the school work is taken up by the weaknesses noted? How often have such weaknesses occurred? Are they in fact real weaknesses? When, for example, the facts are simply, 'some paper on the floor,' 'two or three boys talking,' 'argument with the teacher,' etc., during the single visit of the examiner, one questions the validity of any report supported solely by the opinion of the supervising official. And the judgments of the average supervising official can not, in the wildest flights of the imagination, be regarded as expert testimony.

It is expected, in the teacher-pupil relation, that the teacher show good cause for rating a pupil 'unsatisfactory,' such cause including, evidence of help given, of poor work done by the pupil, of notice to parents, etc. So, too, in the case of the principal-teacher relation, no teacher should be reported upon adversely, unless evidence is presented, (1) that standards and types have been outlined for her; (2) that aid and encouragement have been given; (3) that repeated inspections have been made; and (4) that any examination given has been based upon work done by the teacher as outlined in her plan or progress book. Cooperation all along the line should be the aim in view.

APPENDIX B

A CASE IN POINT

The following statements resulted from a report made by a principal against a teacher. The teacher appealed. It is to be noted that no real evidence is presented to support any of the judgments given by either side. As evidence, they are worthless. The exhibits speak for themselves.

Exhibit A
Appeal of the teacher, A. B. C.

Q. E. D., Esq., Superintendent.

Dear Sir:

Herewith I respectfully enclose a statement of my case which I trust you will be kind enough to reconsider in view of the circumstances. I have the honor to be,

Yours respectfully,

A. B. C., Teacher.

To Q. E. D., Esq., Superintendent.

Dear Sir:

With regard to the non-renewal of my License, I respectfully submit the following statement which contains good reasons why *I was not* treated justly.

At 10 o'clock, A. M., Friday, September —, 19—, Mr. X. Y. Z., the Principal, called me from my classroom, told me that my License was not renewed, and that I should leave at once. This information came to me as a great surprise as I was *tacitly allowed* by the Principal to assume that my *work* for the past year was *quite satisfactory*. On June —, 19—, I completed two years in the service of the Board, during which I *lost no time and was never late nor unpunctual*. During the two years or four terms, I was *never told* by the Principal *how he rated me or what my marks were*. And having asked him how he marked me for the fall term, 19—, *he evaded the question* by a sarcastic piece of wit at my expense. Now the *lack of this information* was quite unfair to me because I naturally assumed that my work was meritorious. The *fact of being ignorant* of their ratings may be corroborated by other teachers in respect to themselves.

With regard to the *Data* I wish to make and declare the following statement as true:

During the *first two terms* (19—, ——), the Principal, Mr. X. Y. Z., *never once came* to my classroom to give a lesson, *to hear a lesson given by me, or to make any* suggestions for a change or improvement in my class instruction; nor did he help me by either giving or recommending any preferable text-books, but *his invariable* reply to any question asked by me was: "I have no time." For this period he *did not ask* for nor examine any of the written work of my classes; in fact the *only purpose* for which he ever came to my

classroom was to find something from my Roll Book, such as the figures for the Monthly attendances. Taking the *first term of my second year* into consideration as regards Discipline, he personally commended me once or twice casually when passing the classroom door. But in *respect to Instruction,* he *never stopped in my classroom long* enough *to know what it was like or what the results of it were.* During the second term of my second year I had a class of 48 Boys and as before he personally approved of my Discipline (He could see *that* in passing my classroom door), but with regard to class instruction, he *did not come* to my classroom until, I think, the third-last day of the term, when the following was the procedure:

The Principal came to my classroom at 15 minutes before closing time. I was *having a reading lesson then.* He appeared to be excited, nervous, and in a hurry. He told me to ask the boys a few general questions in the class History, which I did. He then repeated his question as to Geography and Elementary Science. I gave the boys a few questions in each subject. This occupied *altogether about seven minutes.* He then went away and came back excited and complaining about all his work, etc. It was about 3.10 o'clock. He asked me to show him the written work of the term. I gave it to him. It consisted of Writing copies, Compositions, Dictations, Transcriptions, and Drawings. He gave a *cursory glance* over a *few pieces* of the work, occupying, I judge, about *half a minute,* during which time he complained of all

his work. Then he showed a report sheet on which he said he should answer questions regarding me. He said, "How will I answer this question? 'How do you use apperception?' " to which I replied, "That's for you to answer." He said, "How do you expect me to answer? I am on the verge of nervous breakdown from want of sleep." He then left my classroom saying that the report should be sent by him to Mr. Q. E. D. on that afternoon, the latest.

If you think I have been treated fairly, I will respectfully submit to your decision; but if you think I have not, I ask for a *renewal* of License and a *transfer to another School.*

Respectfully yours,
A. B. C., Teacher.

Sworn before me this — day of
September, 19—,
M. N. O., Notary Public.

Exhibit B
Letter of lawyer to principal.

Mr. X. Y. Z., Principal.

My Dear Sir:

Will you kindly let me know what assistance and inspection was given to the work of A. B. C., who was for two years teaching under a temporary license under you? Kindly indicate specifically the number (?) and amount of time given to assisting him in his work, examination of his work by attendance and

observation in his classroom, and observation of his discipline. He has called upon me and feels that an injustice has been done him by reason of the failure to renew his license for the third year. I have his story, but want to hear from you before doing anything.

Thanking you in advance I am,

Very truly yours,

L. L. B., Lawyer.

Exhibit C

Reply of Principal, X. Y. Z.

Dr. Q. E. D., Superintendent,

Dear Sir:

I have read the statement of Mr. A. B. C. in reference to non-renewal of his license. I notified Mr. A. B. C. that his license had not been renewed as soon as I received word from you to that effect. I did not evade Mr. A. B. C.'s request as to his rating, and have no recollection of making sarcastic remarks to him about the matter. Mr. A. B. C. in his communication gives the impression that his discipline was very good. In point of fact, until about the middle of last term his discipline was very poor; frequently the entire class was in an unproar, while he stood before them helpless and apparently dazed. A number of times I requested him to give me the names of the worst boys; he almost invariably declined, sometimes saying, "Ah! Well! What is the use!" From statements made to me by

parents it looked as though at times he resorted to violent means to maintain discipline. I allowed the parents to see him, and as no formal complaints were made, the matter rested. Finally, and this occurred the early part of last term, I called him out of his room, and told him that if a parent again came, I would prefer charges against him to the local school board. I may have commended his class when they were behaving in order to encourage him; until last term his rating in discipline was C, and it was not until June of this year that I gave him for the first time the rating B, straining a point to do so. In my report to you, under heading, 'Control of Class,' I said, "Fair to good. There has been considerable improvement."

The statement in the matter of my report to you as to his use of apperception, correlation, etc., is also very misleading. In my report on his case made to you in June, I call your attention especially to what I said in answer to the different headings. Is it likely that I obtained these answers from him? I have been in Mr. A. B. C.'s room many times and he knew that I was not satisfied with his work. At the formal examination I gave his class towards the end of the term I spent a much longer time in his room than would appear from his statement, in order to make sure that I would do him no injustice. The account of what occurred, of the remarks I made, is ridiculous and intended to excite prejudice.

I have not, during the past year, been able to spend the time in his room that would have been desirable in his case, owing to conditions in my school. There are in the school a number of teachers who began teaching with me, among them, four young men, who are doing excellent work. Mr. A. B. C. claimed to have had seven or eight years' experience, three of them in the schools of ———, and three in the schools of ———, before he was appointed to this school. Is it not strange that he needed all the extra help, and that in his case the principal of the school was to blame because he did not succeed? The teacher has not done well because, in the first place, he is uncouth and awkward—as I said in my report to you, "His ways impress boys as strange——" and the pupils do not have the feeling of respect which the teacher should inspire. Besides this, he is not only a little slow to follow instructions, but he does not seem to care to follow them. A number of times I have found fault with him in respect to the manner in which he attended to his work while on duty in the yard or street, at dismissal or during recess. He did not attend to the work of classroom instruction with that enthusiasm and zeal that the earnest teacher should have, but he was mechanical, easy-going, and indifferent.

Respectfully,

X. Y. Z., Principal.

APPENDIX C

ELLIOTT SCHEME OF MEASUREMENT.

OUTLINE

OF

Tentative Scheme for the Measurement of Teaching Efficiency

EDWARD C. ELLIOTT

University of Wisconsin

PRESENTED TO THE

SECOND ANNUAL STATE CONVENTION
OF CITY SUPERINTENDENTS
OCT. 7 AND 8, 1910

HELD UNDER DIRECTION OF

C. P. CARY

State Superintendent of Public Instruction

Tentative Scheme for Measurement of Teaching Efficiency

NOTE.—Criticisms and suggestions of the scheme will be appreciated, and should be sent to Edward C. Elliott, University of Wisconsin, Madison.

City..... School..... Room.....

Teacher..... Grade..... Subject.....

No. of Pupils.....

Boys..... Date.....

Girls.....

Special conditions .....

.....

GENERAL INSTRUCTIONS.

Deduct from possible 4; very slight ½; slight 1; marked 2; very marked 2½; extreme 3½. (Possible 8 or 12, in same proportion.)

Deduct from possible 2; very slight ¼; slight ½; marked 1; very marked 1½; extreme 1¾.

Minimum standard for approval; according to the exigencies of the school system.

TEACHING EFFICIENCY—100 Points.	Suggested values	Deficiencies	Determined values
I. PHYSICAL EFFICIENCY—12 points	(12)	....	....
1. Impressions—general	2	....	....
2. Health—general	2	....	....
3. Voice	2	....	....
4. Habits—personal	2	....	....
5. Energy	2	....	....
6. Endurance	2	....	....

TEACHING EFFICIENCY—100 Points.	Suggested values	Deficiencies	Determined values
II. MORAL—NATIVE EFFICIENCY—14 points	(14)	....	....
1. Self control	2	....	....
2. Optimism—enthusiasm	2	....	....
3. Sympathy—tact	2	....	....
4. Industry—earnestness	2	....	....
5. Adaptability	2	....	....
6. Sense of humor	2	....	....
7. Judicial mindedness	2	....	....
III. ADMINISTRATIVE EFFICIENCY—10 points	(10)	....	....
1. Initiative	2	....	....
2. Promptness and accuracy	2	....	....
3. Executive capacity	2	....	....
4. Economy (time, property)	2	....	....
5. Co-operation (associates and superiors)	2	....	....
IV. DYNAMIC EFFICIENCY—24 points	(24)	....	....
1. Preparation	4	....	....
Including:			
a. Intellectual capacity.			
b. Academic education.			
c. Professional training.			
2. Professional attitudes and interest	2	....	....
3. Human nature attitudes and interest (Appreciation of values—intellectual, social and moral in child life)	2	....	....
4. Instructional skill	12	....	....
Including:			
a. Attention and interest of pupils.			
b. Formality vs. vitality of instruction.			
c. Motor vs. verbal methods.			
d. Application of the technique of teaching; organization and presentation of subject matter; the recitation as artistic product.			
e. Application of the technique of living; participation and contribution of pupils; the recitation as a democratic activity.			
f. The tools and machinery of instruction; effective adaptation.			
g. Assignment of work			
5. Governmental and directive skill. (discipline)	4	....	....

ELLIOTT SCHEME

TEACHING EFFICIENCY—700 Points.	Suggested values	Deficiencies	Determined values
V. PROJECTED EFFICIENCY—6 points	(6)	....	....
1. Continuing preparation ..... a. Daily; b. Weekly; c. Annual....	2	....	....
2. The school program	2	....	....
3. Increase of professional equipment (professional reading and study; travel)	2	....	....
VI. ACHIEVED EFFICIENCY—24 points	(24)	....	....
1. Achievement.			
a. Illustrative results	8	....	....
b. Examinations; success and attainment of pupils	12	....	....
2. Stimulation of individuals and community	4	....	....
VII. SOCIAL EFFICIENCY—10 points	(10)	....	....
1. Intra-mural interests	2	....	....
2. Extra-mural interests.			
a. Cultural and ethical	2	....	....
b. Civic	2	....	....
c. School—patrons	4	....	....

PROPOSITIONS

1. Is it possible to devise, and to apply to the teaching process, impersonal, quantitative standards whereby the relative worth and efficiency of teachers may be determined more justly and with greater precision than under the ordinary practices of the day?
2. Does not the effective organization, administration and supervision of public schools require that the conditions and results of the teacher's work be subjected to measurements of a quantitative rather than of a qualitative nature?
3. Is it possible for the present generation to make any reliable and satisfactory conclusions concerning the direction and rate of educational progress without standards of value resting upon a quantitative basis?

APPENDIX D

SCHEME OF MEASUREMENT BASED ON THE OHIO STATE SCHOOL SURVEY

A. PHYSICAL CONDITIONS AFFECTING INSTRUCTION

1. Does the teacher show in practice knowledge of proper heat control and ventilation?
2. Examples of good and bad practice in this respect.
3. What was the relative humidity of the room?
4. Would you detect foul air by the sense of smell?
5. Does the teacher seat the pupils as well as possible under the conditions found?
   a. No. of seats too large (feet dangling).
   b. No. of seats too small.
   c. No. of pupils seated in seats of one size with desks of another.
6. Other examples of good and bad practice in seating.
7. Does the teacher show in practice knowledge of good lighting?
8. Examples of good and bad practice (Mention particularly means taken to obviate cross lights and to make up for insufficient window area).

B. PERSONALITY OF TEACHER (Check √)

1. Teacher appears to be

vigorous——	weak ——————
poised———	nervous————
neat ———	slovenly ———
at ease ——	embarrassed——

Remarks ————————————

2. Days absent on account of own illness since September —— to date ——; during previous term if teacher taught ——
Remarks ——————————

3. Voice is (Check V)

pleasing——	harsh ———
clear ———	indistinct——
low————	high ————

Remarks————————————

4. In her personal relations with her pupils does she appear (Check V)

to stimulate ——	to suppress ——
to win cordial co-operation——	to antagonize——
to be sympathetic——	harsh ————
strict ————	lax ————
even tempered———	irritable ————
reasonable ———	unreasonable——
tolerant ————	intolerant ———
dignified———	undignified ——
courteous ———	rude ————
encouraging ——	nagging ————
firm————————	weak ————
tactful————————	blundering ——
enthusiastic ——	diffident————
quick to react——	slow to react ——
quiet ————	noisy ————
systematic ———	disorderly ———
resourceful———	dependent ———

Remarks————————————

C. THE RECITATION

1. Type of lesson (Check ✓)
   a. Drill lesson
      (1) simple —— (to make response automatic)
      (2) study —— (to memorize, *e. g.*, a poem)
      (3) review —— (to fix automatic response)
   b. Problem lesson
      (1) recitation —— (to solve problem, material, previously given)
      (2) study —— (to teach how to study)
      (3) review —— (as above, to fix and test)
      (4) topic recitation ——
   c. Appreciation lesson —— (to develop tastes, interests, ideals in art, literature, etc.)

2. Time lost Check (✓, and indicate number of minutes)
   a. Calling class ——————
   b. Dismissing class ——————
   c. Distributing materials ——————
   d. Indistinct speech of teacher ——
   e. Indistinct speech of pupils ——
   f. Unnecessary talking of teacher ——
   g. Unnecessary talking of pupils ——
   h. Failure to have devices ready ——
   i. Use of ill-adapted devices ——
   Remarks ——————

3. No. of pupils in class appearing
   to be interested—— indifferent——
   energetic ———— lazy ————
   independent ——— dependent——
4. No. of pupils asking
   pertinent questions of fact ————
   relevant thought provoking questions—
   Remarks ————————————
5. Responses of pupils: No. giving
   a. fluent topical recitations ———
   b. word or phrase responses ——
   c. sentence responses ————
   d. incoherent responses ————
   e. failing to answer ————
   (If impossible to give number for b, c, and d, indicate to what extent responses were choppy or incoherent)
6. Evidence of teaching ability as shown by (Check V).
   a. Extent to which teacher's questions are
      (1) thought provoking
      (2) calling for facts
      (3) suggesting the answer
      (4) answered by "yes" or "no"
      (5) irrelevant
      (6) not definite—vague
   b. Extent to which material of recitation is
      (1) confined to text
      (2) within pupil's comprehension
      (3) related to children's lives and experiences.
      (4) adapted to children's present and future needs.
      (5) worth while

c. Extent to which the teaching
   (1) is rambling
   (2) is formal, mechanical
   (3) stimulates initiative of pupils
   (4) requires independent thinking
   (5) develops pupils' resourcefulness
   (6) requires co-operation of pupils.
   (7) is fixed on essentials
   (8) requires pupils to organize material
   (9) utilizes children's experiences
   (10) clears up pupils' difficulties
   (11) shows use of material in solution of present or future problems

d. Extent to which pupils
   (1) had a clear idea of purpose of lesson
   (2) were self-reliant
   (3) tested their own solutions
   (4) acted and thought on their own account
   (5) cooperated with the teacher and classmates
   (6) persisted in getting desired result
   (7) differentiated between essentials and non-essentials
   (8) organized their material
   (9) seemed well grounded in previous work

e. Correction of essential errors
   (1) Describe method used
   (2) Are non-essential errors too much emphasized?
   (3) What record is kept of recurring errors likely to retard progress of pupils?

7. No. of pupils
   not reciting— reciting once— twice— three times — more than three times—

8. Was the assignment (Check ✓)
   a. definite and clear?
   b. related to present lesson?
   c. such that the pupils were prepared to attack it intelligently?
   d. formal—from text-book?
   e. by topics or problems?
   f. hastily made at dismissal?
   g. omitted?

D. No. of pupils in room but not in reciting section
   No. industrious —— indolent——
   No. minding their own business ——
   No. interfering with others————

E. Subjects
   1. Reading 2. Writing
   3. Grammar 4. Language
   5. Spelling 6. Arithmetic
   7. Geography 8. Civics
   9. History 10. Physiology and Hygiene
   11. Music 12. Drawing
   No. of pupils supplied with necessary books—
   No. of pupils not so supplied ————————

13. Composition
    a. No. of pupils writing compositions
    b. No. of pupils not writing compositions ——
    c. Total no. of words in compositions
    d. No. of mistakes in spelling ——
    e. No. of mistakes in grammar ——
    f. No. of mistakes in punctuation ——
    g. No. of mistakes in capitalization——
    h. No. of papers well written ——
    i. No. of papers legibly written ——
    j. No. of papers illegibly written ——
    k. No. of cases of incomplete sentences ——
    l. No. of cases of sentences run together ——
    m. No. of pupils showing inability to paragraph correctly ——
    n. Ave. mark in spelling at last report ——
    o. Ave. mark in writing at last report ——
    Remarks ————————————

F. Errors and good points (Check √)
    1. Errors
        a. Repeating answers
        b. Repeating questions
        c. Leading questions
        d. Questions requiring Yes and No answers only
        e. 'Pumping' questions
        f. Unnecessary telling
        g. No topical recitations
        h. Teacher teaches from book

i. Pupils recite in words of book, etc.
j. Teacher unnecessarily interrupts pupils' recitations
k. Insufficient emphasis on vital points

(Take notes of actual blackboard work —good, fair and poor)

2. Good points
   a. Frequent legitimate questions by pupils as to (1) What? (2) How? (3) Where? (4) Why? (5) When?
   b. Pupils at blackboard
   c. Work at board neat
   d. Teacher insists on clear and distinct enunciation
   e. Initiative taken by pupils

(Note any other striking points. Underline teacher's favorite subject)

G. QUALIFICATIONS OF THE TEACHER

1. Teacher's age—— Sex—— Grade of certificate——
2. Length of professional training in months—
3. Character of professional training: Normal school, normal college, college of education, summer courses, other (Underline)
4. Length of academic training in months Elementary——High—— College——
5. Length of teaching service in months——
6. Length of service in present school up to September, 19—, in months——
7. Length of present contract in months——
8. What educational periodicals does the teacher read?

9. What professional works has the teacher read this year?
10. What other lines of self-improvement is the teacher following?

H. RECORDS AND REPORTS

1. Are visits of parents and supervisors recorded?
2. Is the length of each visit recorded?
3. Is tardiness recorded? Causes? How?
4. Are absences recorded? Causes? How?
5. Are 'beginners' indicated in the records?
6. Are causes of leaving school, dropping out, recorded?
7. Are continuous pupil record cards kept?
8. Are the records and reports carefully kept?
9. Are they easily accessible?
10. Are they in good condition as to neatness and order?

I. HEALTH REGULATIONS

1. Periods *per* week of class work required of normal pupils ——
2. Hours *per* week of study in school outside of class periods ——
3. Hours *per* week of home study required——
4. Minutes *per* day of rest and recess periods ——
5. Hours *per* week of organized exercise and athletics ——
6. No. of pupils taking part regularly in exercise in gymnasium —— on field ——

LB1715 .A75
The measurement of teaching efficie
Gutman Library
APB8560
3 2044 028 940 260

DATE DUE

JUN 0 9 2005